

SERVICE MANUAL

**Model Name : EP719 / EP716 / EP719R /
EP716R / EP719P / EP716P**

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Date	Version	Description
2005/7/4	V1.0	Initial Issue
2005/8/9	V2.0	Revise Preface, Chapter 1, Appendix A & Appendix B
2006/5/29	V3.0	Revise Preface, Appendix A

Preface

This manual is applied to EP719 / EP716 DMD serial projection system. The manual gives you a brief description of basic technical information to help in service and maintain the product.

Your customers will appreciate the quick response time when you immediately identify problems that occur with our products. We expect your customers will appreciate the service that you offer them.

This manual is for technicians and people who have an electronic background. Please send the product back to the distributor for repairing and do not attempt to do anything that is complex or is not mentioned in the troubleshooting.

The Main Difference please refer to Appendix A for Different Part Table.

Notice:

The information found in this manual is subject to change without prior notice. Any subsequent changes made to the data herein will be incorporated in future edition.

EP719/EP716 serial Service Manual

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Manual Version 2.0

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Introduction

1-1 Product Highlights

- One panel 0.55" DMD XGA projection system with 1800 ANSI lumens (EP719)
- One panel 0.55" DMD SVGA projection system with 1500 ANSI lumens (EP716)
- Philips 180W UHP Lamp dimmable (Eco Mode) to 150W (EP719)
- Philips 200W UHP Lamp dimmable (Eco Mode) to 150W (EP716)
- High efficiency cooling system with system acoustic noise Level
- Light weight Approx. 5.0 lbs.
- Manual focus projection, 1:1.10 zoom lens
- True 1024 x 768 resolution, 16.7M True colors (EP719)
- True 800 x 600 resolution, 16.7M True colors (EP716)
- With Front, Rear, Desktop, and Ceiling Mount Projection mode
- Build-in full screen NTSC/PAL/SECAM video capability with S-video / Composite / Component and HDTV terminals
- SXGA/XGA/SVGA/VGA/MAC compatibility.
- Auto image re-sizing to 1024 x 768 full screen (EP719)
- Auto image re-sizing to 800 x 600 full screen (EP716)
- Auto detection of computer signal input
- Auto Image synchronization (Auto-tracking /frequency /position adjustment)
- Powerful enlarge and freeze function
- Automatically saves adjustments for future use
- On-screen menu with 11 languages
- Built-in one speaker with 2 Watt amplifier
- Self protect timer for hot re-strike of UHP lamp
- Adaptive voltage control fan speed

Dimensions (WxHxD) - 230 mm x 210 mm(include focus ring and I/O connector) x 95 mm (include feet and stick handle)

Weight - Approx. 5.0 lbs.

Cooling System

- Advanced air flow
- Two fans with low system acoustic noise level
- Temperature control circuits with adaptive voltage control fan speed
- Maximum touch temperature follows UL 60950

Lamp housing	<ul style="list-style-type: none"> - Lamp could be changed by customer, but should follow the user manual instruction - Replaceable Lamp should be provided by Coretronic or its authorized agencies
Tilt Angle	<ul style="list-style-type: none"> - 6 degrees with elevator mechanism
Keystone correction	<ul style="list-style-type: none"> - +/- 15 degrees
Color	<ul style="list-style-type: none"> - Top & back cover : Silver painting - Bottom & Front cover, black materials
Materials	<ul style="list-style-type: none"> - PC+ABS C6200 for top cover / rear cover - PC 950 or Norly N225 for front cover
Lamp Door Protection	<ul style="list-style-type: none"> - Lamp power supply shut off automatically when door opens
Power Supply	<ul style="list-style-type: none"> - Universal AC 100 -- 240V ~ 50 / 60 Hz with PFC input - 200W for Philips Lamp @ normal operation - Variance FAN speed control (Depend on temperature variance)
Power Consumption	<ul style="list-style-type: none"> - 265 Watt +/- 10% at normal operation - Standby mode < 15W
Terminals (EP719)	<ul style="list-style-type: none"> - One 29-pin DVI-I connector for Digital signal with HDCP(only for USA). One D-Sub 15-pin female connector for analog RGB / HDTV / component video / SCART RGB Sync - One separate D-Sub 15p connector for 2nd VGA in (for EMEA & Asia) - One D-Sub 15-pin female connector for monitor output - One phone Jack for audio input - One Mini DIN 4-pin for S-Video Input - One RCA Jack for Composite Video Input - USB connector for page up/down
Input signal spec.	<ul style="list-style-type: none"> - PC Signal (analog) - Hsync Frequency 31.35~80 kHz - Vsync Frequency 56-85 Hz - Video Signal RGB (PC)

Analog RGB 0.7Vp-p, 75 ohm
 Analog RGB 1Vp-p, 75 ohm, Sync. Signal
 Separate TTL H,V Sync.
 Composite TTL Sync.

- Video
- Composite video 1Vp-p, 75 ohm
- S-video Luminance 0.714Vp-p, 75 ohm
- Chrominance 0.286Vp-p, 75 ohm

System Controller - TI DDP2000

Video Compatibility - Standards
 NTSC:M(3.58MHz), 4.43MHz
 PAL: B, D, G, H, I, M, N
 SECAM: B, D, G, K, K1, L
 HDTV: 480i/p, 576i/p, 720p, 1080i

XGA / Compression - By using “DDP2000” Chips to compress SXGA image into XGA display

Control Key Pad - Power / Standby
 - Directional keys (UP/DOWN/RIGHT/LEFT keys)
 - Enter, Source (LEFT key), Menu

Wireless Remote Controller - Power on (off)
 - Re-Sync,
 - DVI-D
 - VGA, S-Video
 - Composite
 - Volume +, Volume -
 - Vertical keystone correction (UP and Down key)
 - Directional keys (UP / down / left / right)
 - Hide, Freeze
 - Menu, D-zoom
 - Page up, Page down (EP719)
 -Display Mode (EP716)

Indicator - “Lamp” Red
 - “Temp” Red

- "Power" Green

On-Screen Display Menu - 11 languages selection
English, French, German, Italian, Spanish, Norwegian, Russian,
Traditional Chinese, Simplified Chinese, Japanese, Korea

Audio - One 8 ohm 2W speaker

Panel Spec (EP719) - TI DMD, 0.55" 12 degree DDR XGA Digital Mirror Device
- Number of active dots : 1024(H) x 768(V)

Projection Lens - F# 2.7 - 3.0 @ 2.4m, f=21.83~23.81mm @ 2.36m.
1.10 x Manual Zoom Lens

Projection Image Size - Adjustable from 34.67" to 254.22" (Diagonal)

Throw Distance - Suggested throw distance: 1.5~10m (Optical Performance)
1.5~12m (Mechanical travel)

Brightness (EP719) - 1530 ANSI Lumens (Typical)
- 1200 ANSI Lumens (Minimum)

Brightness (EP716) - 1300 ANSI Lumens (Typical)
- 1000 ANSI Lumens (Minimum)

Contrast - 1500:1 Typical (Full on / full off)
- 1000:1 Minimum (Full on / full off)

Uniformity - 85% Marketing (Japan standard)
- 75% Typical (Japan standard)
- 60% Minimum (Japan standard)

1-2 Compatible Modes(Analog & Digital)

EP719 Analog

Compatibility	Resolution	V-Sync[Hz]	H-Sync[KHz]
VGA	640x350	70	31.5
	640x350	85	37.9
	640x400	85	37.9
	640x480	60	31.5
	640x480	72	37.9
	640x480	75	37.5
	640x480	85	43.3
	720x400	70	31.5
	720x400	85	37.9
SVGA	800x600	56	35.2
	800x600	60	37.9
	800x600	72	48.1
	800x600	75	46.9
	800x600	85	53.7
XGA	1024x768	60	48.4
	1024x768	70	56.5
	1024x768	75	60.0
	1024x768	85	68.7
SXGA	1152x864	70	63.8
	1152x864	75	67.5
	1152x864	85	77.1
	1280x1024	60	63.98
	1280x1024	75	79.98
SXGA+	1400x1050	60	63.98
MAC LC13"	640x480	66.66	34.98
MAC II 13"	640x480	66.68	35
MAC 16"	832x624	74.55	49.725
MAC 19"	1024x768	75	60.24
MAC	1152x870	75.06	68.68
MACG4	640x480	60	31.35
i Mac DV	1024x768	75	60
i Mac DV	1152x870	75	68.49
i Mac DV	1280x960	60	60

EP719 Digital



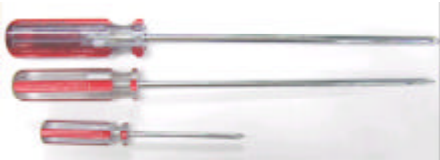
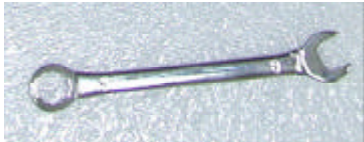

Compatibility	Resolution	V-Sync[Hz]	H-Sync[KHz]
VGA	640x350	70	31.5
	640x350	85	37.9
	640x400	85	37.9
	640x480	60	31.5
	640x480	72	37.9
	640x480	75	37.5
	640x480	85	43.3
	720x400	70	31.5
	720x400	85	37.9
SVGA	800x600	56	35.2
	800x600	60	37.9
	800x600	72	48.1
	800x600	75	46.9
	800x600	85	53.7
XGA	1024x768	60	48.4
	1024x768	70	56.5
	1024x768	75	60.0
	1024x768	85	68.7
SXGA	1152x864	70	63.8
	1152x864	75	67.5
	1152x864	85	77.1
	1280x1024	60	63.98
SXGA+	1400x1050	60	63.98

EP716 Analog

Compatibility	Resolution	V-Sync[Hz]	H-Sync[KHz]
VGA	640x350	70	31.5
	640x350	85	37.9
	640x400	85	37.9
	640x480	60	31.5
	640x480	72	37.9
	640x480	75	37.5
	640x480	85	43.3
	720x400	70	31.5
	720x400	85	37.9
SVGA	800x600	56	35.2
	800x600	60	37.9
	800x600	72	48.1
	800x600	75	46.9
	800x600	85	53.7
XGA	1024x768	60	48.4
	1024x768	70	56.5
	1024x768	75	60.0
	1024x768	85	68.7
SXGA	1152x864	70	63.8
	1152x864	75	67.5
	1280x1024	60	63.98
	1280x960	60	60.0
MAC LC13"	640x480	66.66	34.98
MAC II 13"	640x480	66.68	35
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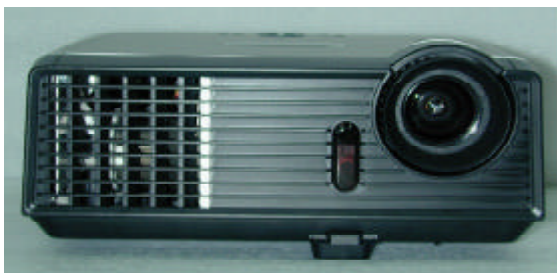
Disassembly Procedure

Equipment Needed

Item	Photo
Long Nose Nipper (Left) Angle Cutting Nipper (Right)	
Hex Sleeves 5mm (Top) Screw Bit (-) 101	
Screw Bit (+) : 107, 102, 101 (from Top to Bottom)	
Wrench (8mm)	
Nipper	

Appearance

The Front Side



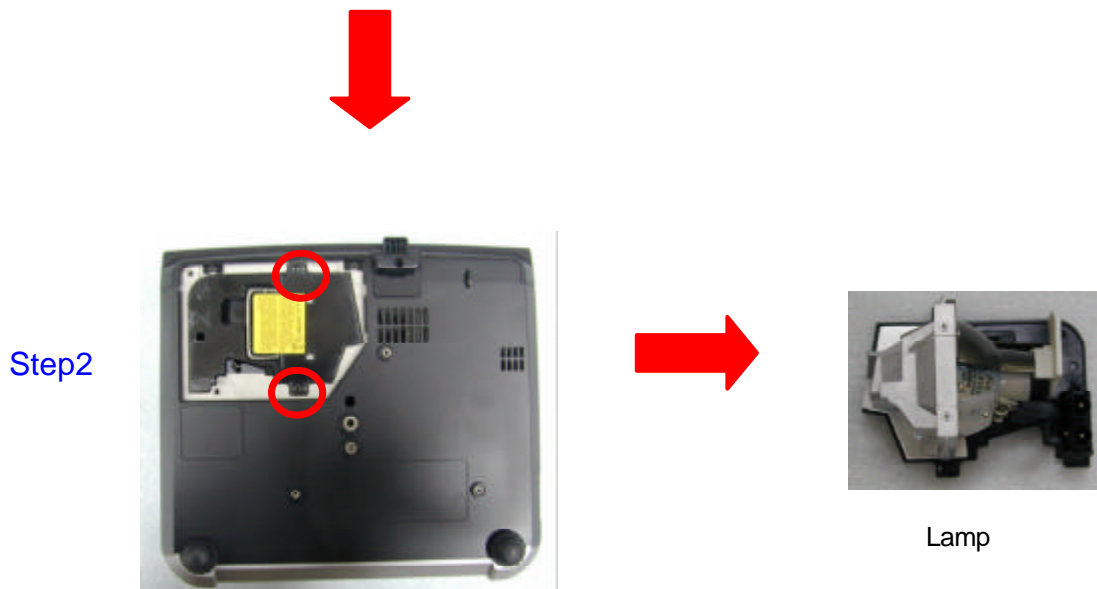
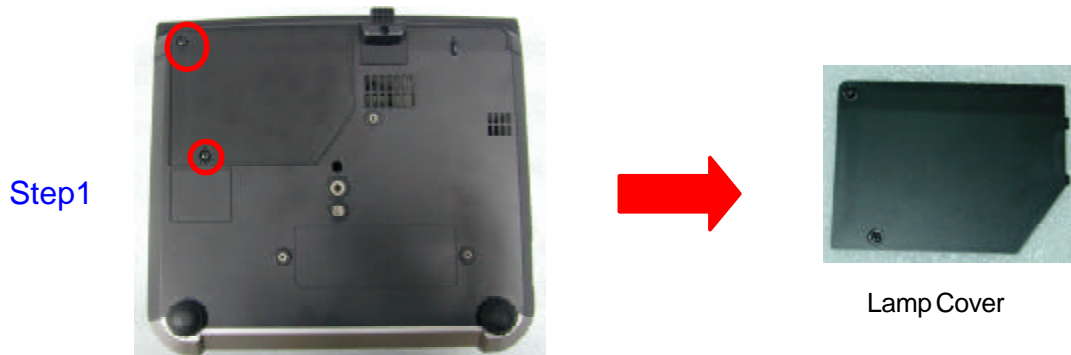
The Rear Side



2-1 Remove Lamp and Lamp Cover

Step1: Turn unit facedown, unscrew two screws to remove Lamp Cover.

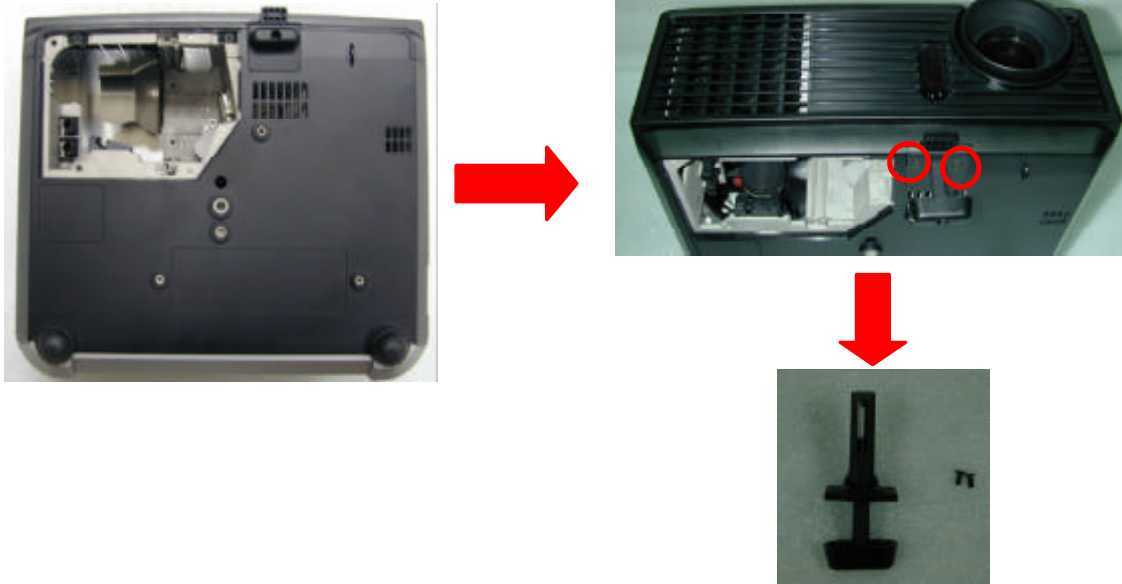
Step2: Unscrew two screws to pull out Lamp Module.



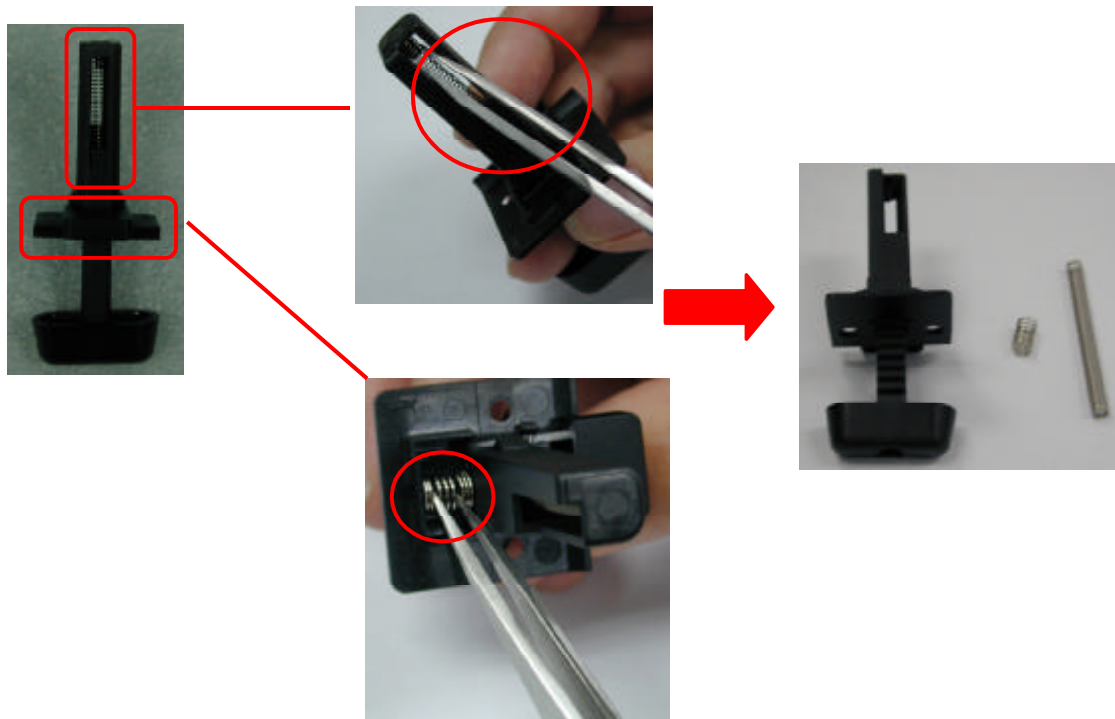
2-2 Remove Elevator Module, Keypad Board and Top Cover

1. Remove Elevator Module

Step1: Push the elevator and unscrew two screws to remove the elevator module.



Step2: Use a nipper To clip out a small spring and a long spring front the elevator.



Step 3: Use the bottom side of nipper to push down the tenon to separate elevator.

Step4: Unscrew one screw to remove the top of elevator.

Step5: Push down to separate the body of elevator.

Step 3



Step 4

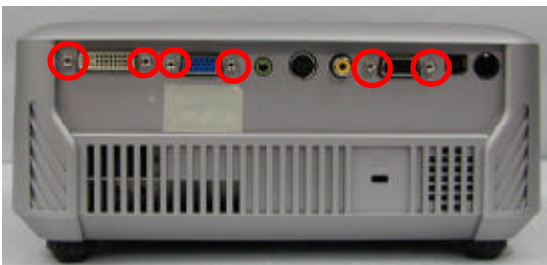


step 5



2. Remove Rear Cover

Step1: Unscrew six screws



Step2: Pull open from the edge of the rear cover



Step3: Detach rear cover from the bottom side.

(As the picture shows)



Rear Cover

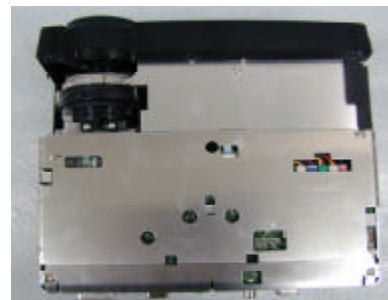
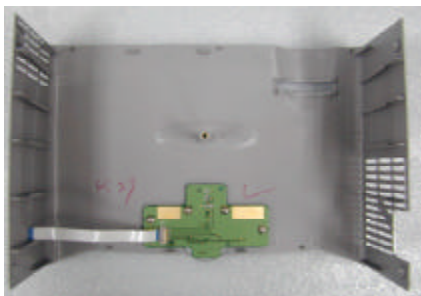
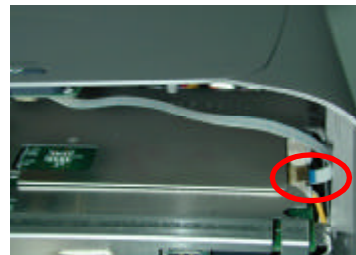
3. Remove Top Cover

Step1: Unscerw five screws. (Two screws in each side, one screw in the bottom)

There are two screws this side.



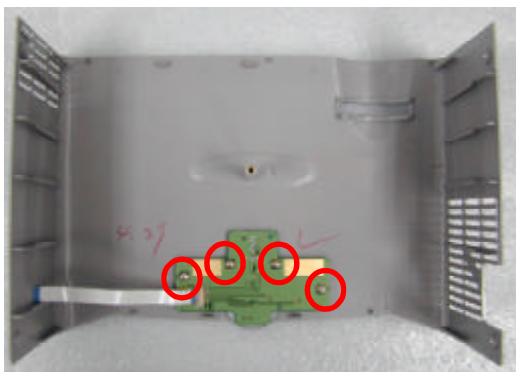
Step2: Lift the Top Cover and pull out the FPC Cable which connect main board & control board.



4. Remove Control Board and Control Botton

Step 1: Unscrew four screws.

Step 2: Pull up FPC Cable.



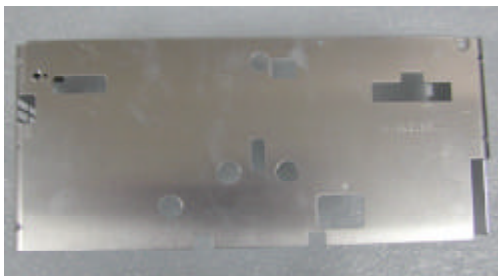
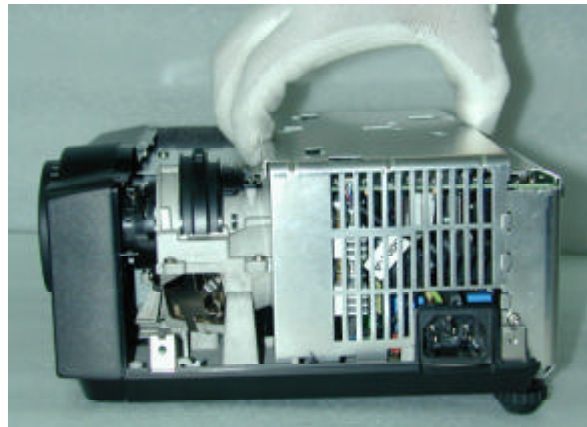
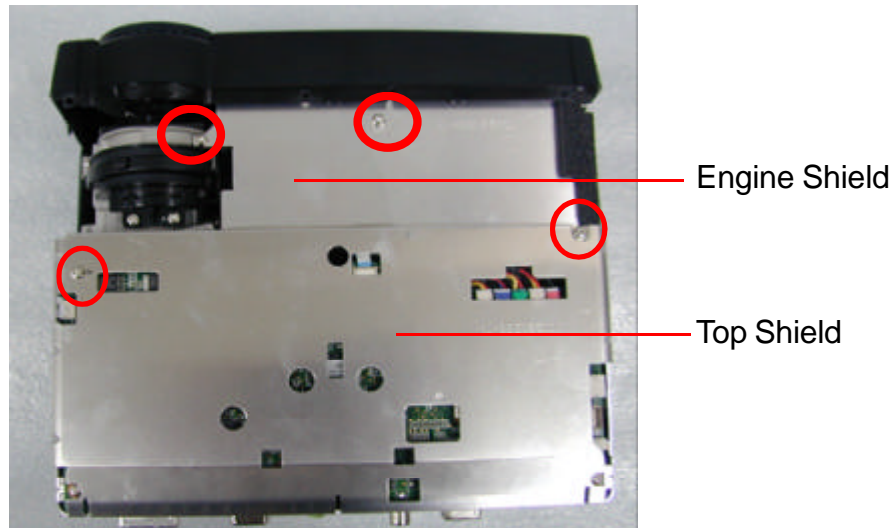
Control Board Control Botton

2-3 Remove Back Shield, Speaker, Main Board and Front Cover

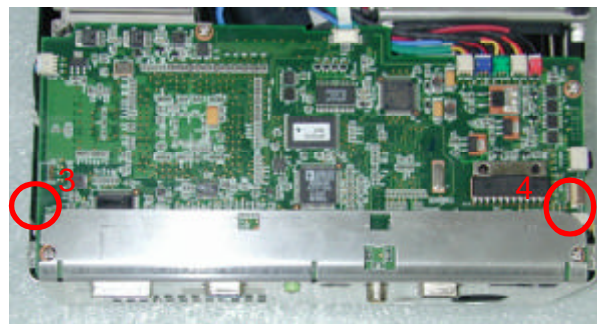
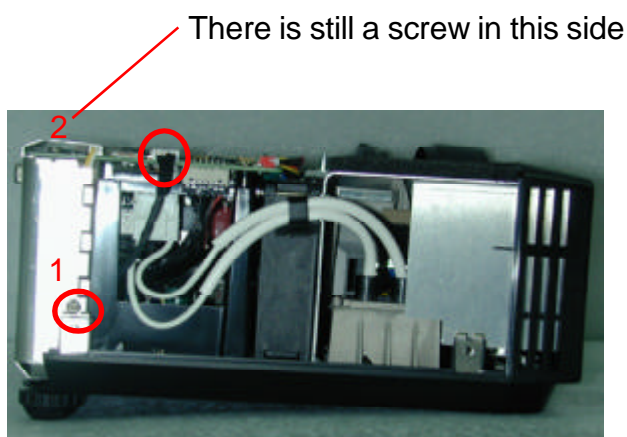
1. Remove Back Shield and Speaker

Step1: Unscrew two screws to remove top shield.

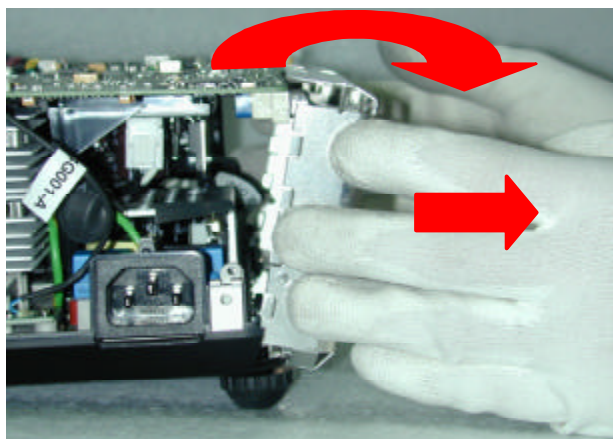
Step2: Unscrew two screws to remove the engine shield.



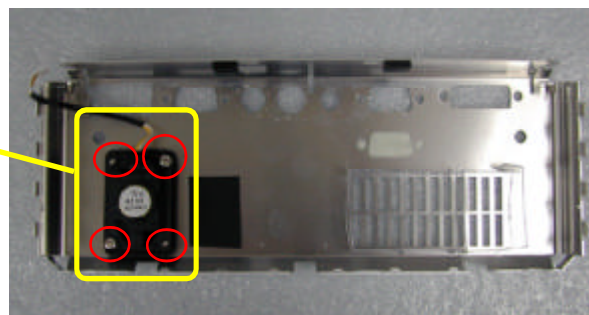
Step3: Unscrew four screws and unplug one wire to remove back shield.



NOTE: When you remove the back shield, you have to detach it from the top .(As the picture show)

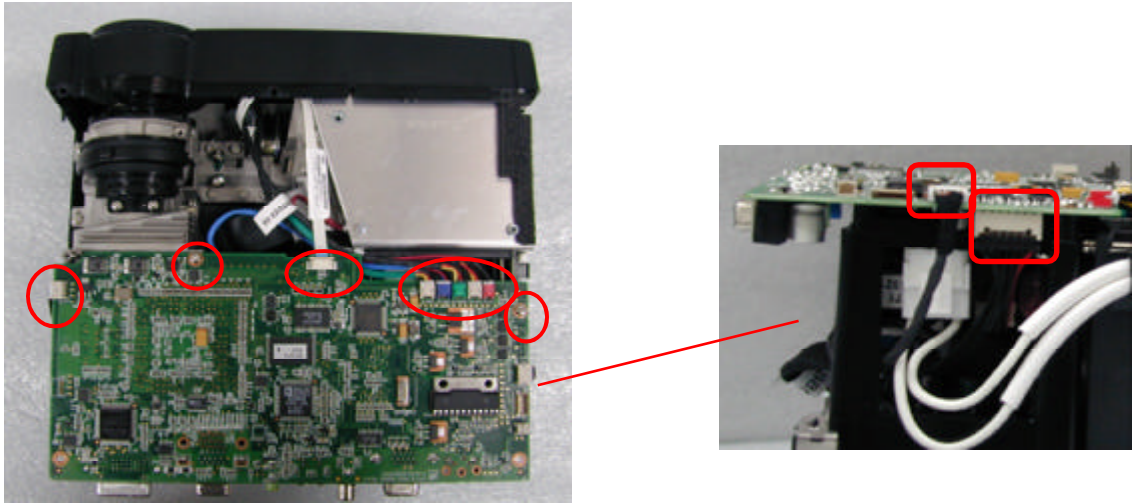


Step4: Unscrew four screw to remove speaker from back shield.

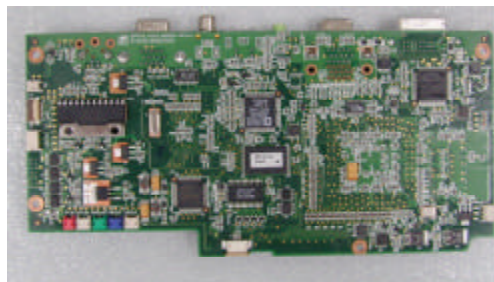
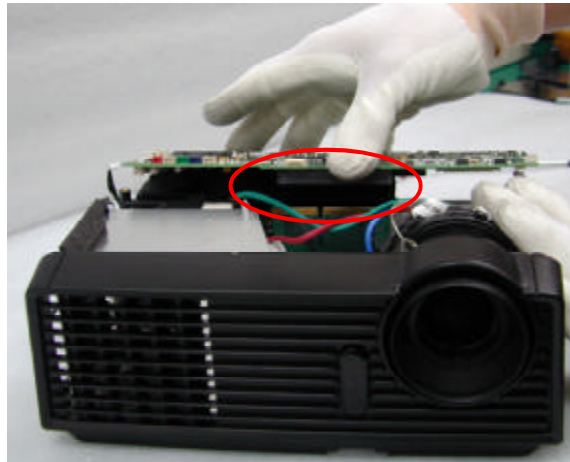


2. Remove Main Board

Step5: Unscrew two screws and unplug nine wires to remove main board.



Note: Main board and DMD is connected by a connector, in order to remove main board, you have to pull up and remove it.



3. Remove Front Cover

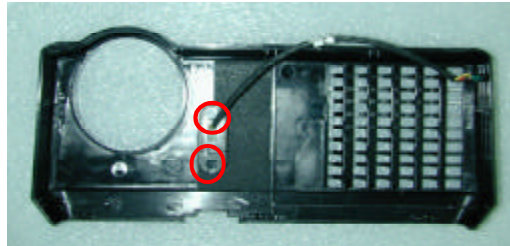
Step1: Loose two screws to pull out the front cover.

Step2 : Unscrew two screws to remove IR sensor lens and IR sensor board.

Step1:



Step2:

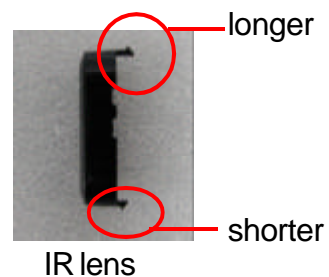


Note: To remove the IR lens from front cover, you have to use a tool to push the tenon of the lens as the picture shows.



IR sensor

Front cover

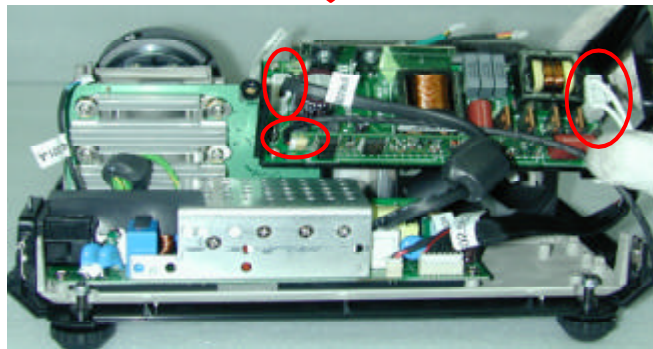


Note : The longer side of IR lens is near to the top cover.
The shorter side of IR lens is near to the bottom cover.

2.4 Remove Lamp Driver, LVPS, Thermal Sensor Board and Lamp Module

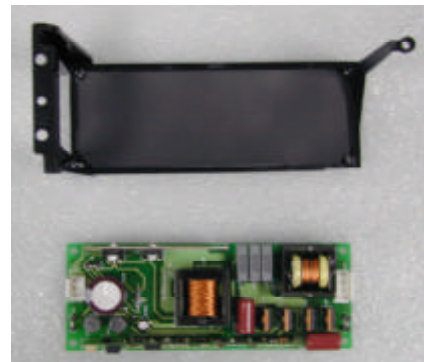
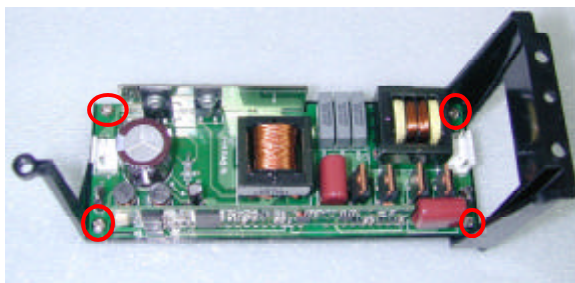
1. Remove Lamp Driver

Step1: Unscrew two screws and unplug three wires to remove the lamp driver module from main body.



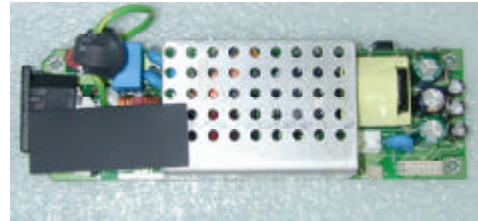
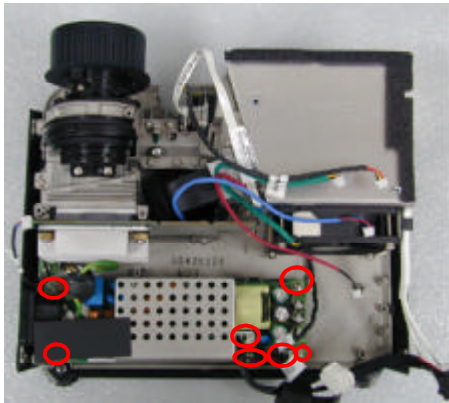
Note : The lamp driver doesn't have the error proof function, when you compose the projector , be sure to put it back in right direction.

Step2 : Unscrew four screws to separate lamp driver and lamp driver holder



2. Remove LVPS

Step1: Unscrew four screws and three wires to remove LVPS

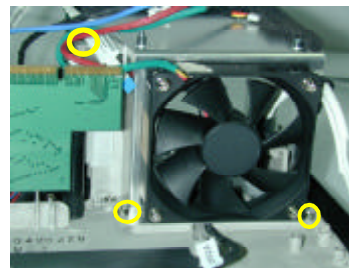
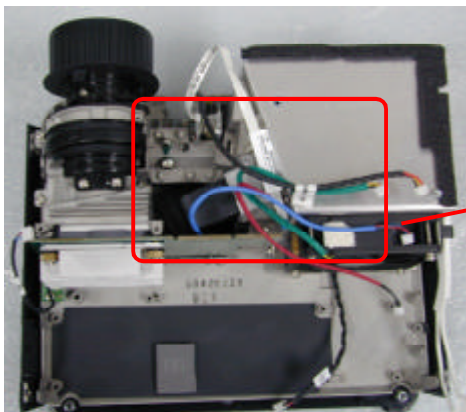


3. Remove Lamp Housing and Lamp Fans

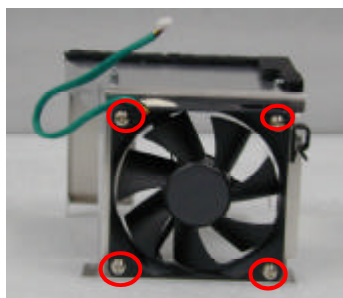
Step1: Unscrew three screws to remove fan module from main body.

Step2: Unscrew four screws to separate lamp housing and lamp fans.

Step 1



Step 2

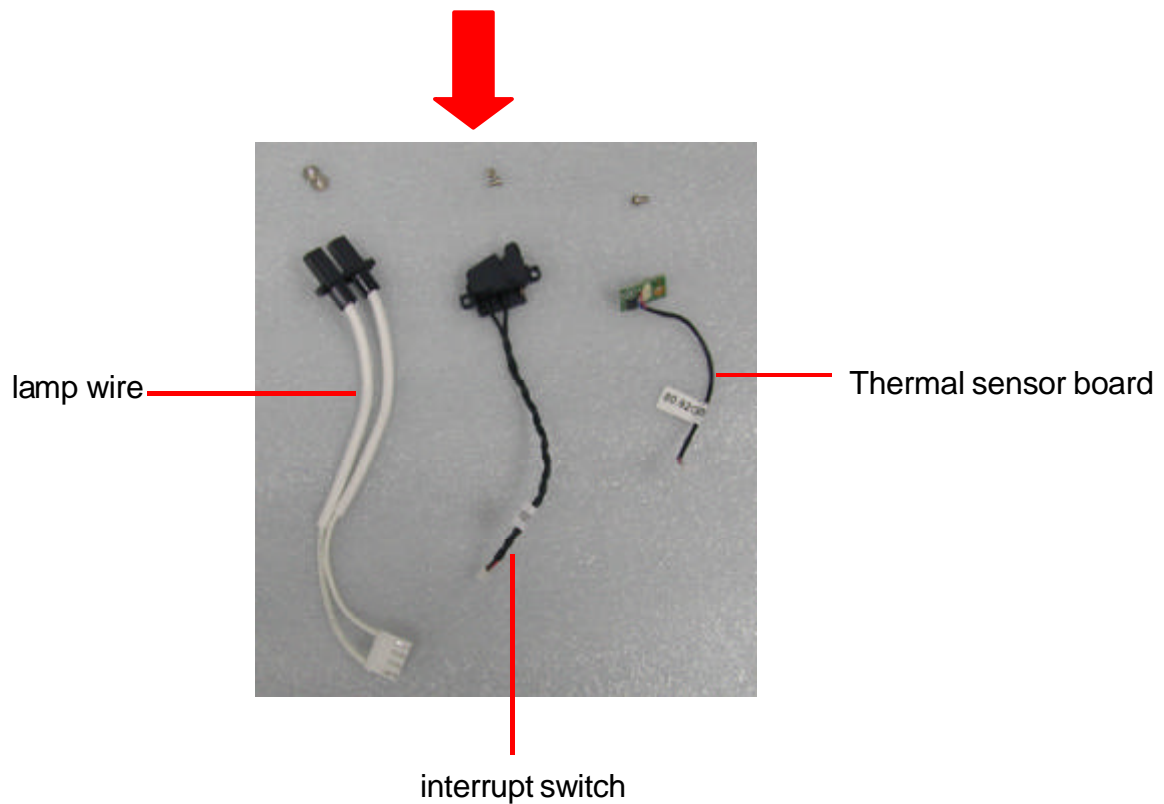
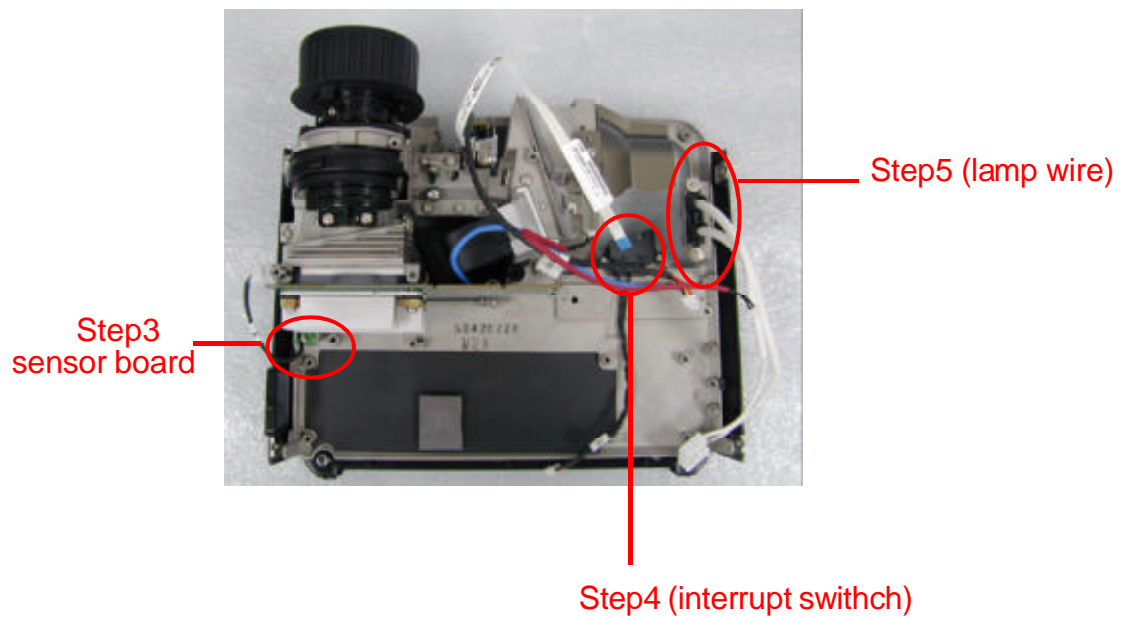


Note: Do not push the center of fan, it is easy to be damaged.

Step3: Unscrew one screw to remove thermal sensor board.

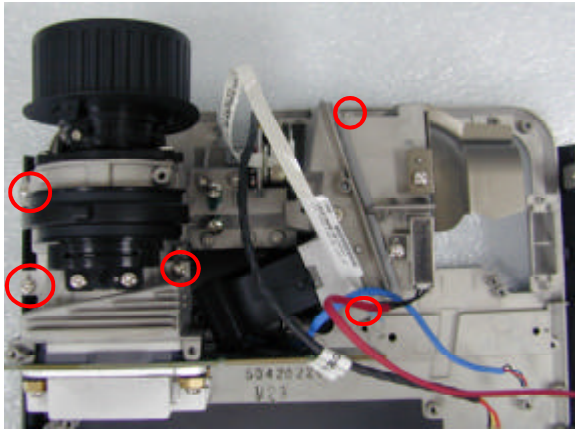
step4: Unscrew two screws to remove interrupt switch.

Step5: Unscrew two screws to remove lamp wire.



2-5 Remove Engine, Thermal Switch, Color Wheel and Photo Sensor

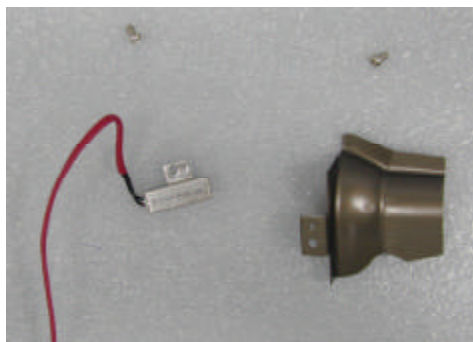
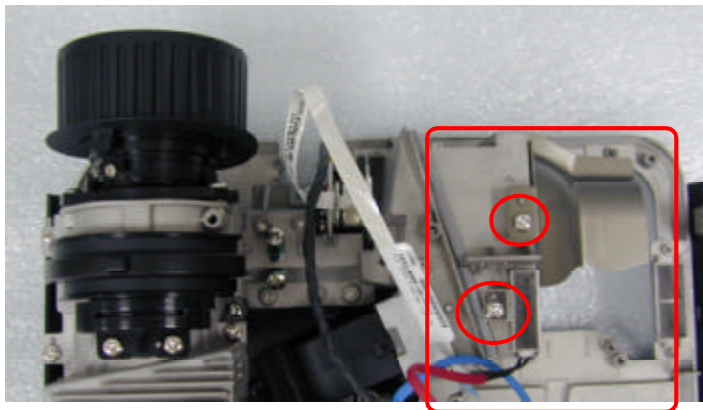
1.Remove Engine -- Unscrew five screws to remove engine.



2. Remove Thermal Switch and Light Cut

Step1: Unscrew one screw to remove thermal switch.

Step2: Unscrew one screw to remove light cut.

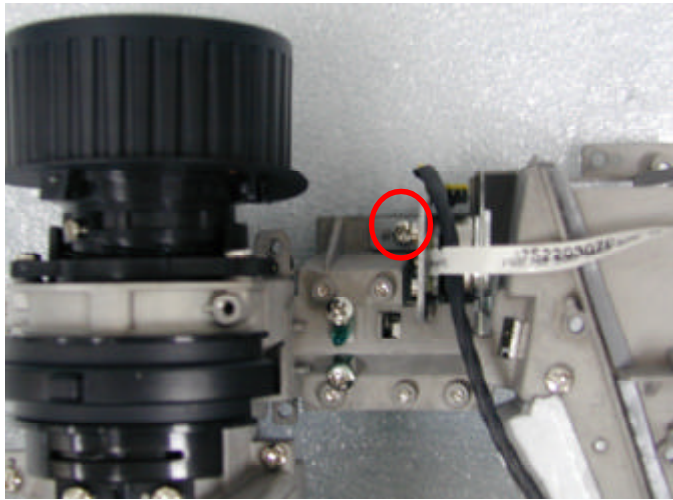


3. Remove Color Wheel and Photo Sensor

Step1: Unscrew one screw to remove color wheel and photo sensor from main body.

Step2: Unscrew one screw to separate color wheel and photo sensor.

Step1



Step2

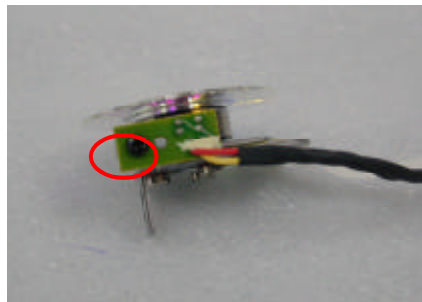
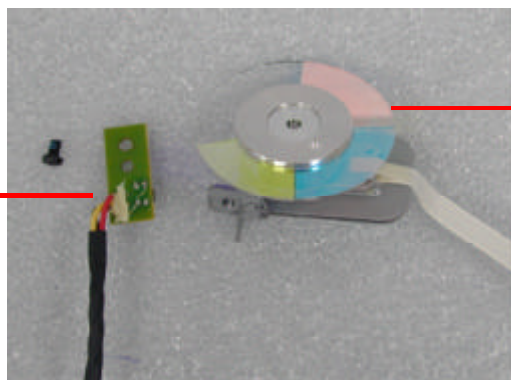


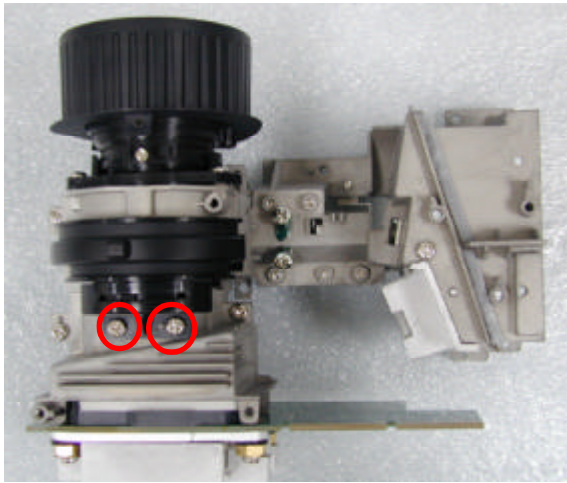
photo sensor



color wheel

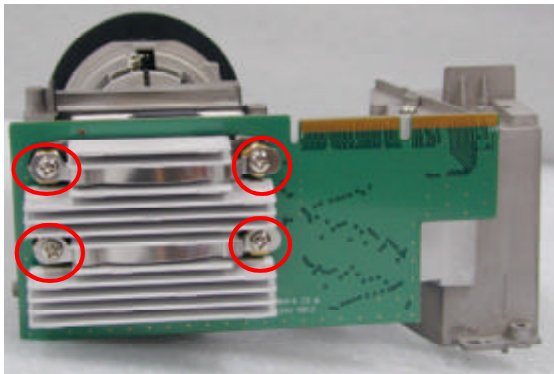
2.6 Remove ZoomRing, DMD Board, Fans and Bottom Cover

1. Remove Zoom Ring -- Unscrew two screws to remove zoom ring.

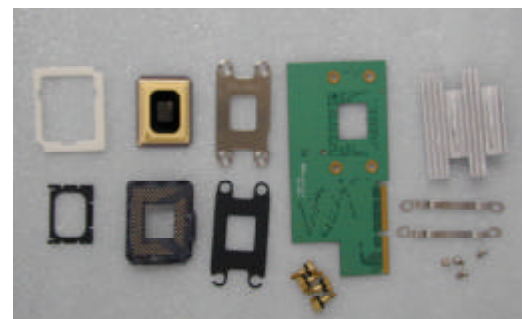
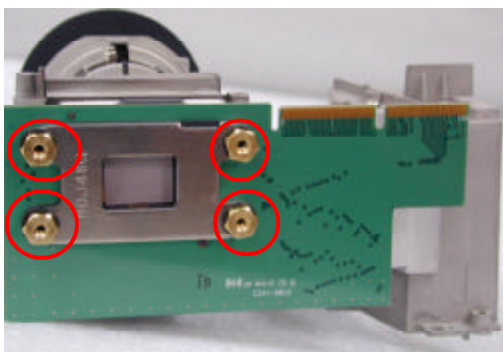


2. Remove DMD Board

Step1: Unscrew four screws to remove spring plate and heat sink.

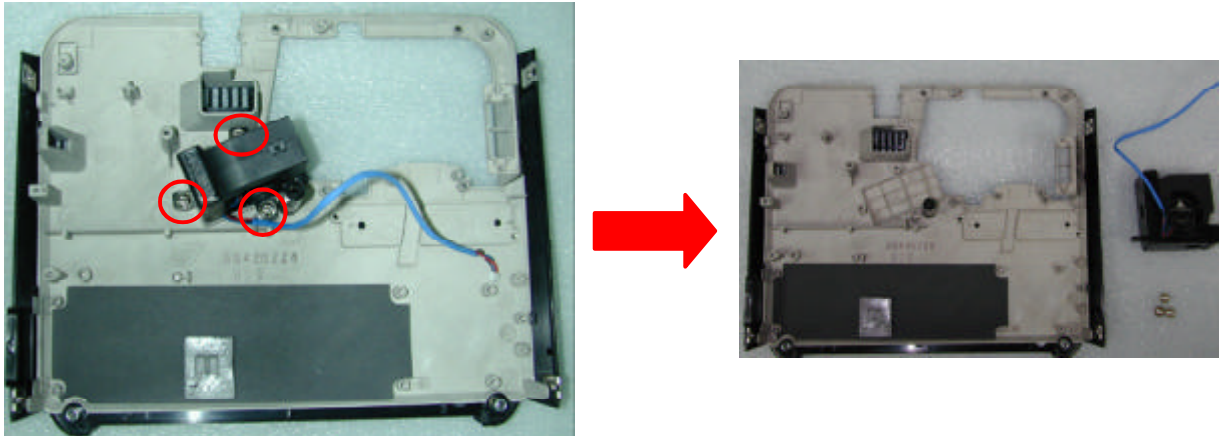


Step2: Unscrew four hex screws to remove DMD Board and separate DMD module.

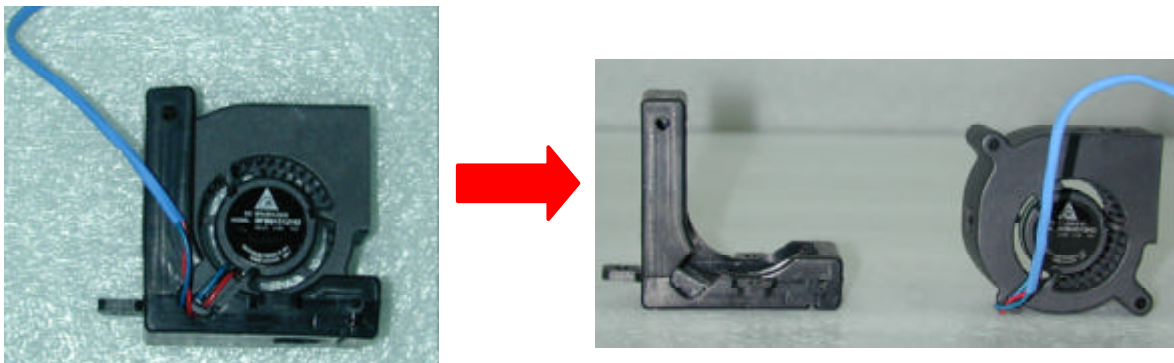


3. Remove Blower Fan Module and Bottom Cover

Step1: Unscrew three screws to remove blower fan from bottom cover.

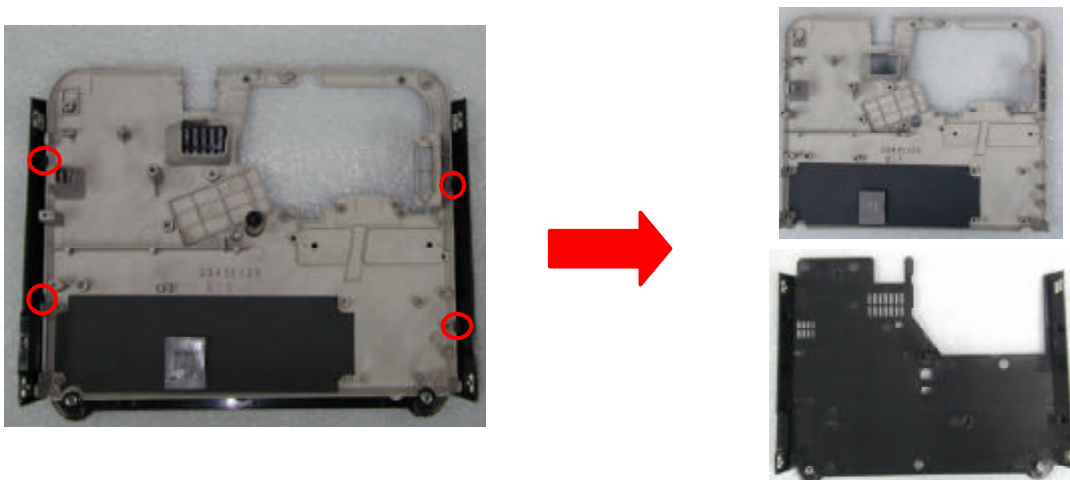


Step2: Separate fan and blower rubber.



Note: Do not press the center of fan, it is easy to damaged.

Step3: There are four tenons, pull them to separate the bottom shield and bracket.



Troubleshooting

Equipment Needed

- PC or pattern generator
- DVD player (Video, S-Video, Audio)
- Quantum Data 802B or CHROMA 2327
- After changing parts, check the below information.

Charge Parts/Update	Version Update	Color Wheel Index	ADC Calibration	Video Calibration	Reset Lamp Use Time	Factory Reset	EDID
MB	v	v	v	v		v	v
FW	v	v	v	v		v	
Color Wheel		v					
Lamp Module					v		

LED Lighting Message

Message	Power LED (Green)	Temp LED	Lamp LED
Standby State (Input power cord)	Flashing	○	○
Lamp lighting	☆	○	○
Power on	☆	○	○
Power off (Cooling)	☆	○	○
Error (Lamp fail)	○	○	☆
Error (Thermal fail)	☆	☆	○
Error (Fan fail)	○	Flashing	○
Error (Over Temp.)	○	☆	○
Error (Lamp Breakdown)	○	○	☆

Steady light ---> ☆

No light ---> ○

Main Procedure

No Power

- Ensure that the power cord and AC power outlet are securely connected.
- Check Lamp Cover and Interrupt Switch
- Ensure that all connectors are securely connected and aren't broken.
- Check DC-DC
- Check Ballast
- Check Main Board

Auto Shut Down

- Check LED Status
 - a. Lamp LED light
 - Check Lamp
 - Check Lamp Driver
 - Check Main Board
 - b. Temp LED Light
 - Check Thermal Sensor
 - Check Thermal Switch
 - Check Fan
 - c. Color Wheel
 - Check color wheel
 - Photo sensor
 - d. No Power
 - Refer to "No Power" troubleshooting

No Image

- Ensure that the signal cables and source are work as well. (If you connect multiple sources at the same time, use the "Source" button on the control panel to switch.)
- Ensure that all connectors are securely connected and aren't broken.
- Check Main Board
- Check DMD Board
- Check Color Wheel
- Check DMD Chip
- Check Engine Module

No Light on

- Ensure that all connectors are securely connected and aren't broken.
- Check Lamp Module
- Check DC-DC
- Check Ballast
- Check Main Board

Mechanical Noise

- Check Color Wheel
- Check Fan Module

Line Bar/Line Defect

- Sometimes it's because of DMD chip and DMD board did not assemble properly
- Check DMD Board
- Check DMD Chip
- Check Main Board

Image Flicker

- Do "Reset" of the OSD Menu.
- Ensure that the signal cables and source are work as well.
- Check Lamp Module
- Check Color Wheel
- Check DMD Board
- Check Main Board

Color Abnormal

- Do "Reset" of the OSD Menu.
- Adjust Color Wheel Index
- Check Main Board
- Check DMD Board
- Check Color Wheel

Poor Uniformity/Shadow

- Ensure the projection screen without dirt.
- Ensure the projection lens is clean.
- Ensure the Brightness is within spec.
(Replace the Lamp if the Brightness is less than spec.)
- Check Engine Module

Dead Pixel/Dust (Out of spec.)

- Ensure the projection screen without dirt
- Ensure the projection lens is clean
- Clean DMD Chip and Engine Module
- Check DMD Chip
- Check Engine Module

Garbage Image

- Ensure that the signal cables and source work as well.
- Check Main Board
- Check DMD Board

Remote Controllor or Control Panel Failed

- Remote Control
 - a. Check Battery
 - b. Check Remote Controller
 - c. IR receiver
- Control Panel
 - a. Check FPC
 - b. Check keypad
 - c. Check Main Board

Function Abnormal

- Do “ Reset” of the OSD menu
- Check Main Board
- Check DMD board

Function Test & Alignment Procedure

4-1 Test Equipment

- IBM PC with XGA resolution (Color Video Signal & Pattern Generator)
- DVD player with Multi-system (NTSC/PAL/SECAM)
- HDTV Tuner or Source (480p, 720p, 1080i), equipped with "S-Video", "Component", "Composite" interface.
- Minolta CL-100
- Quantum Data 802B or CHROMA2327

4-2 Test Condition

- Circumstance Brightness : Dark room less than 2.5 lux.
- Inspection Distance : 1.5m~3m for functional inspection
- Screen Size : 60 inches diagonal (wide)
- After repairing each EP719, the unit should be burn-in (Refer to the table below).

Symptom	Burn-in Time
Normal Repair	2 Hours
NFF	4 Hours
Auto Shutdown	6 Hours

4-3 Test Display Modes & Pattern

Function Test Display Pattern

Item	Test Content	Pattern	Specification	Remark
1	Frequency & Tracking	Fine Line Moire	Eliminate visual wavy noise by Rsync, Frequency or Tracking selection.	Figure 1
2	Contrast/Brightness	64 RGBW scale	Gray level should be distinguishable and without color abnormal.	Figure 2
3	R, G, B and White Color Performance	R, G, B and White Color	Each R, G, B color should be normal without color abnormal issue.	Figure 3~6
4	Screen Uniformity	Full White	Should be compliant with 60%.(Minimum)	Figure 6
5	Dead Pixel (Bright pixel)	Full Black	Cannot accept any bright pixel	Figure 7
	Dead Pixel (Dark pixel)	Full White	The numbers of dead pixel should be smaller or amount to 6 pixel.	Figure 8
6	Blemish (Bright)	Full Black / Gray 30	The bright blemish cannot be accepted if the problem appear with Gary 30 pattern.	Figure 7, 8
7	Blemish (Dark)	Full white / Blue 60	The dark blemish cannot be accepted if the problem appear with Blue 60 pattern.	Figure 6,9
8	Focus	Text Pattern	The text in the corner should be clear after adjust the focus ring.	Figure 10
9	Boundary	Boundary Frame	Horz. And Vert. position of video should be adjustable to be the screen frame.	Figure 11
10	Light Leak	Gray 10	The unit can't accept the leakage is brighter than Gray 10 pattern	Figure 12
11	HDTV	94% White	No discolor	Figure 13
12	ADC Calibration (PC Calibration)	Calibration Pattern	Calibration Pattern should be in full screen mode	Figure 14

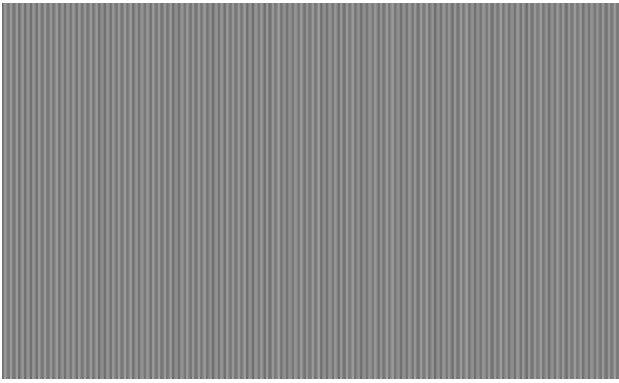


Figure 1. Fine Line Moire

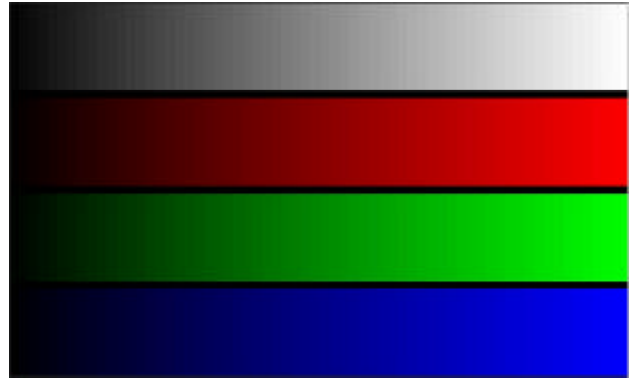


Figure 2. 64 RGBW Scale



Figure 3. Red Pattern



Figure 4. Green Pattern

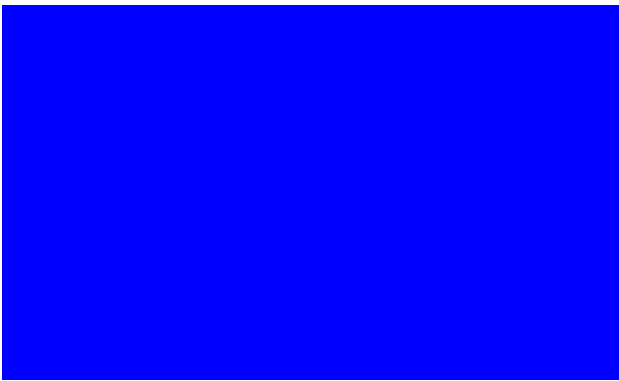


Figure 5. Blue Pattern

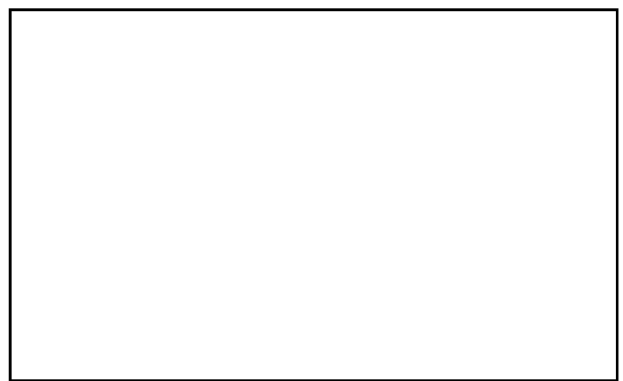


Figure 6. Full White

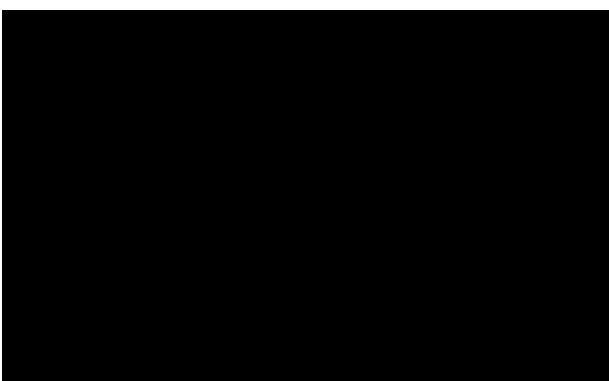


Figure 7. Full Black



Figure 8. Gary 30 Pattern



Figure 9. Blue 60 Pattern

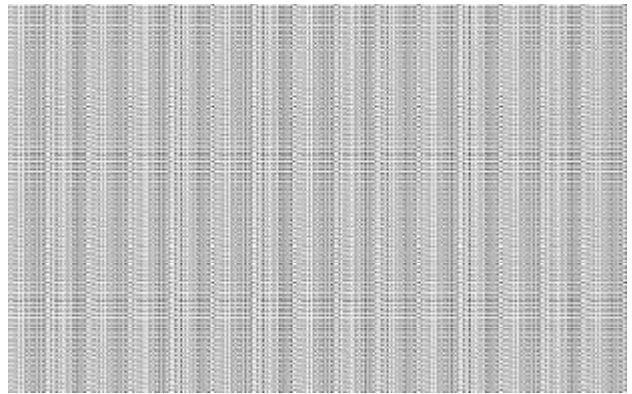


Figure 10. Text Pattern

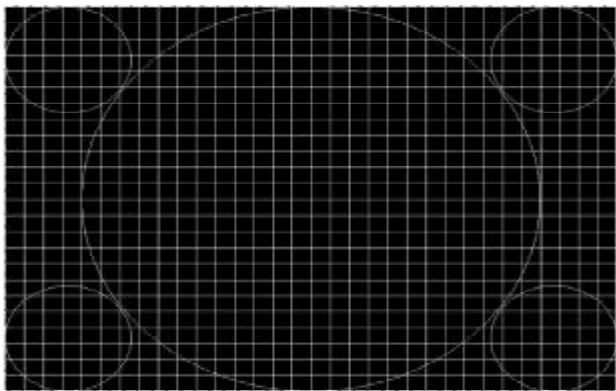


Figure 11. Boundary Frame

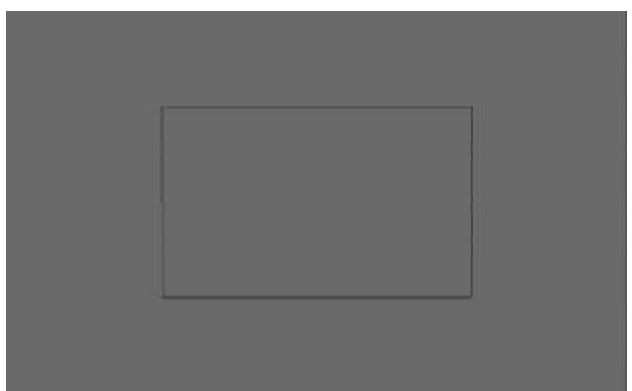


Figure 12. Gary 10 Pattern

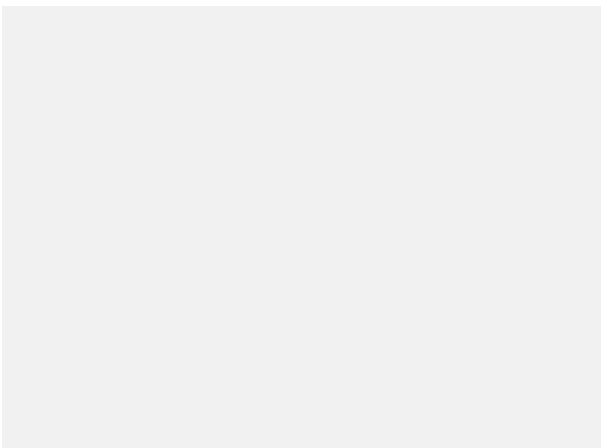


Figure 13. 94%white

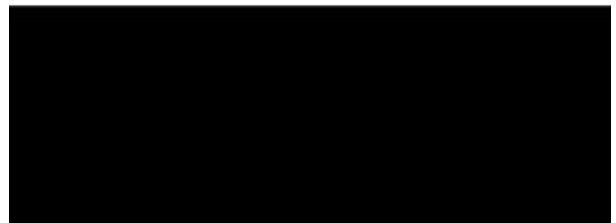


Figure 14. Calibration Pattern

4-4 Inspection Procedure

- Frequency and Tracking

Test Signal : 1024x768@60Hz

Test Pattern : Line Moire Pattern

- * Check and see if image sharpness and focus are well performed.
- * If not, readjust by following steps.
 - (1) Select "Frequency" function to adjust the total pixel number of pixel clock in one line period.
 - (2) Then select "Tracking" function and use right or left arrow key to adjust the value to minimize video flicker.

- Boundary

Test Signal : 1024x768@60Hz

Test Pattern : Boundary Frame

- * Adjust Resync or Frequency/Tracking/H. Position/V. Position to the inner of the screen.

- Focus

Test Signal : 1024x768@60Hz

Test Pattern : Text Pattern

- * Adjust the center clearly, meanwhile, one slightly vague corner in the image is allowed

- HDTV

Equipment : Quantum Data 802B or CHROMA 2327

Test Signal : 480p, 702P, 1080I

Test Pattern : Color Bar

If the test result was discoloration or flickering, please return the unit back to the repair center.

- Color Performance

Test Signal : 1024x768@60Hz

Test Pattern : 64 RGBW scale Pattern and Gray 16 Pattern

- * Please check and ensure if each color is normal and distinguishable
- * If not, please adjust color index of the service mode.

- **Screen Uniformity**

Test Signal : 1024x768@60Hz

Test Pattern : Full White Pattern

- * Please check and ensure the unit is under the spec.
- * Please check and see if it's in normal condition. If not, please return the unit to repair area.
- * Please check and see if there are dead pixels on DMD chip
- * The total numbers and distance of dead pixels should be complaint with the spec.

- **Light Leak**

Test Signal : 1024x768@60Hz

Test Pattern : Gray 10 Pattern

- * Please check and see if the light leaks **Notice*
- * The unit cannot accept the leakage is brighter than Gary 10 pattern

Notice : light leak on reflective edge, eyecatcher, bond wires and exposed metal.

4-5 Calibration

Once Main Board is changed, firmware upgrade should be done as well.

- **Video Calibration**

Test Signal : HDTV Signal (720p)

Test Pattern : Calibration Pattern (Figure 13)

Get into service mode to **select video calibration**.

- **ADC Calibration (PC Calibration)**

Test Signal : 1024x768@60Hz

Test Pattern : Calibration Pattern (Figure 14)

- * Calibration Pattern should be in full screen mode, white above and black below.

Note:

1. Refer to the above Calibration's test signal.
2. Please refer to the follwoing steps for entering service mode.
3. Choose and access video calibration & ADC calibration for correction in service mode. Choose "Exit" to leave the service mode after all.

- **Dead Pixel (Bright/Dark pixel)**

Test Signal : 1024x768@60Hz

Test Pattern : Full Black Pattern and Full White Pattern

(1) Bright Pixel :

Test Pattern : Full Black Pattern

-Please check and ensure that the unit cannot accept any bright pixel.

-If not, please return the unit to repair area.

(2) Dark Pixel :

Test Pattern : Full White Pattern

-Please check and ensure that the pixel number should be smaller or amount to 6 pixels

-If not, please return the unit to repair area.

4-6 Guide to Entering Service Mode and Factory Reset

- **Service Mode**

- Please do the following steps to enter service Mode.

Turn on the power and wait for the disappearance of Logo picture.

- press "Power" button, "◀ (source)", "◀ (source)", "Menu" button sequentially to enter Service Mode Menu.

- **Factory Reset**

After final QC step, we have to erase all saved change again and restore the factory defaults.

Please enter the service mode, and then choose "Factory Reset" then choose "YES" and press enter to see if it works.

This action will allow you to erase all end-user's settings and restore the original setting.

Firmware Upgrade Procedure

5-1 Equipment Needed

Software :

- DLP Composer
- EP719 /EP716 Firmware

Hardware :

- Power Cord
- USB Cable
- PC or Laptop
- EP719 /EP716 Projector

(The file name of the Firmware Code depends on the individual Model Version.
The following Pics is based on EP719.)

5-2 Hardware Setup Procedure

1. Connect USB Cable of PC to USB port of EP719 Projector.



USB Cable

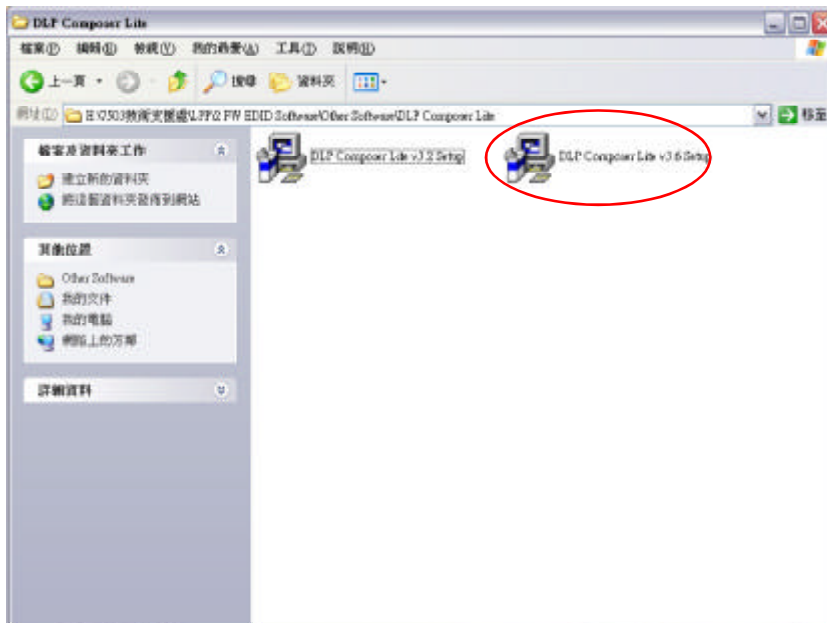


USB Cable

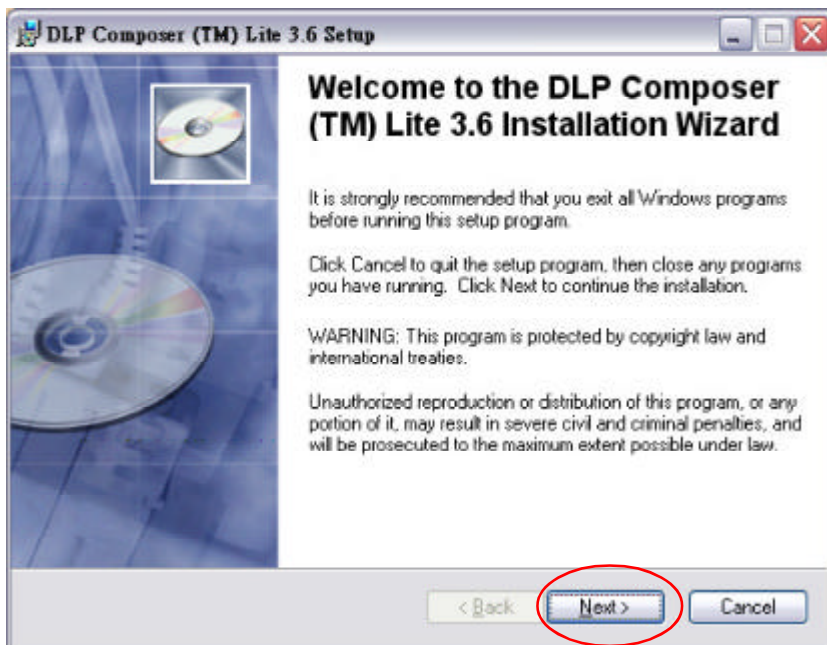
5-3 Firmware Program Installation Procedure

5-3.1 DLP Composer Lite Setup Procedure

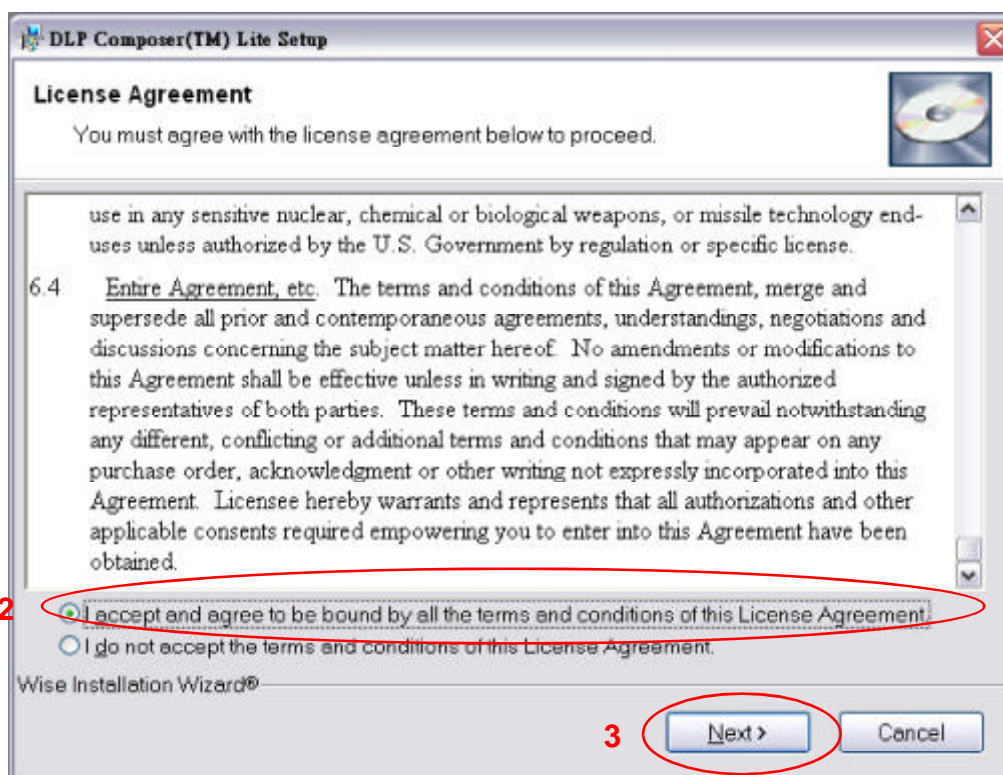
1. Choose “DLP Composer Lite v3.6 Setup” program.



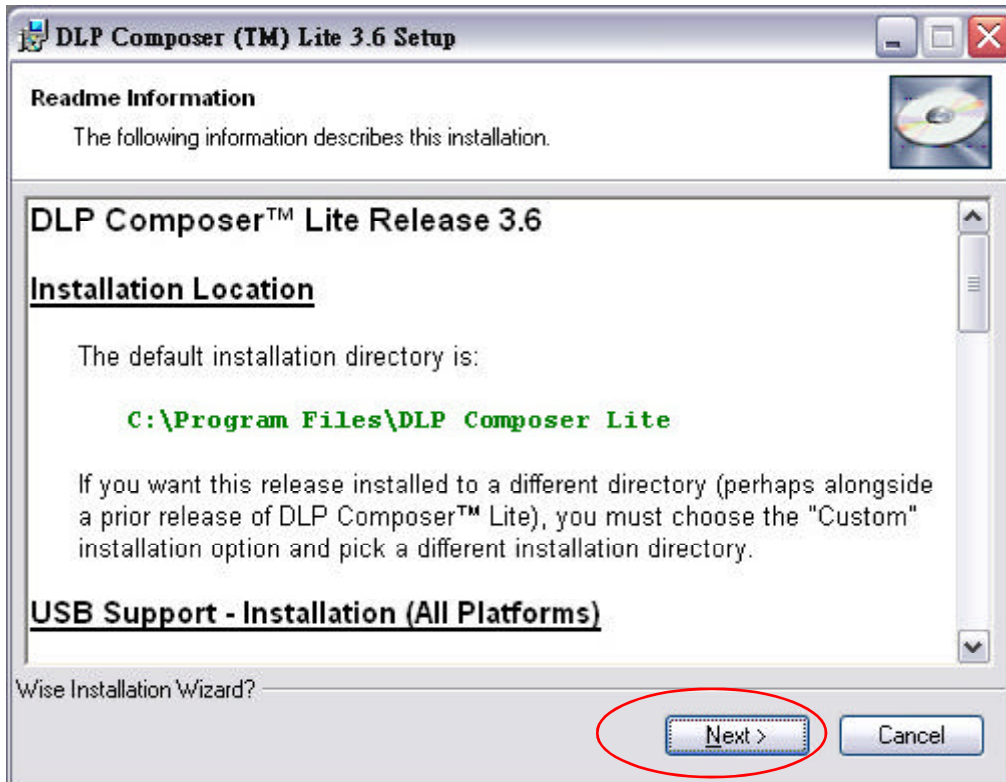
2. Click “Next” button.



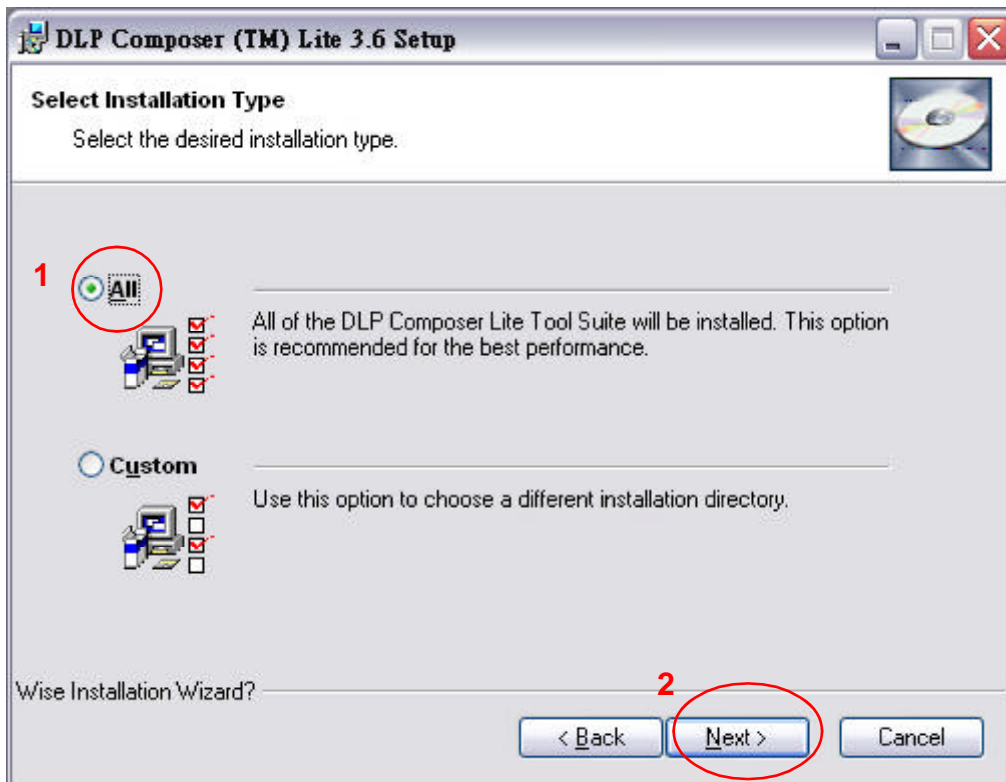
3. Reading the “License Agreement” rules, choose “I accept and agree to be bound by all the terms and conditions of this License Agreement” icon, then click “Next” button.



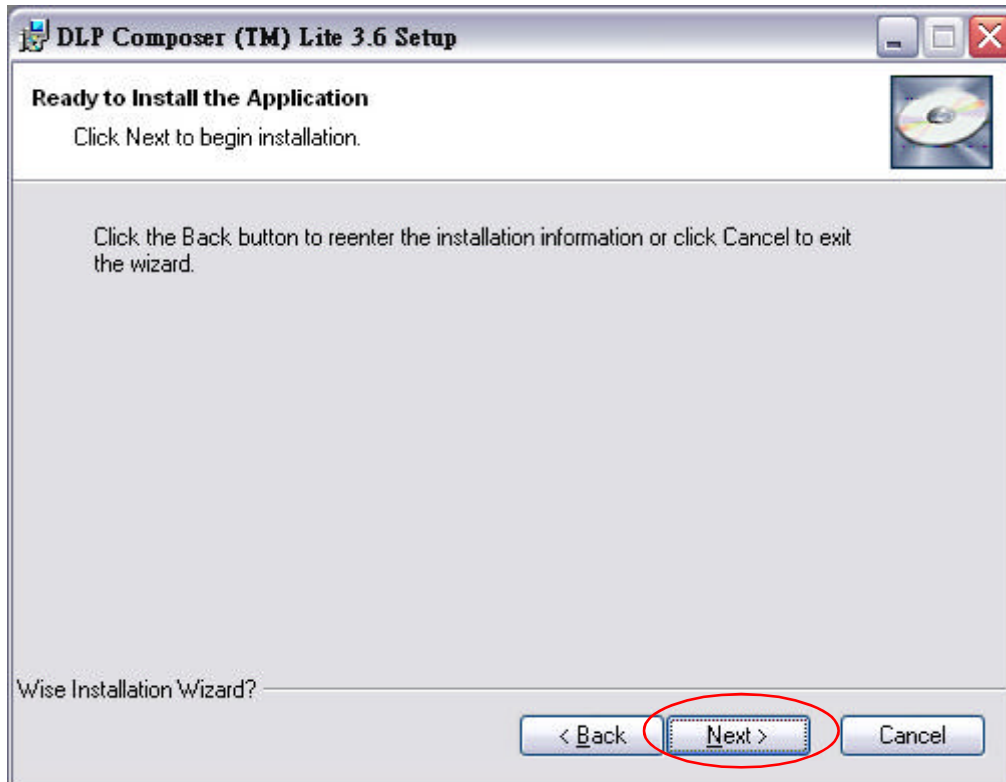
4. Click "Next" button.



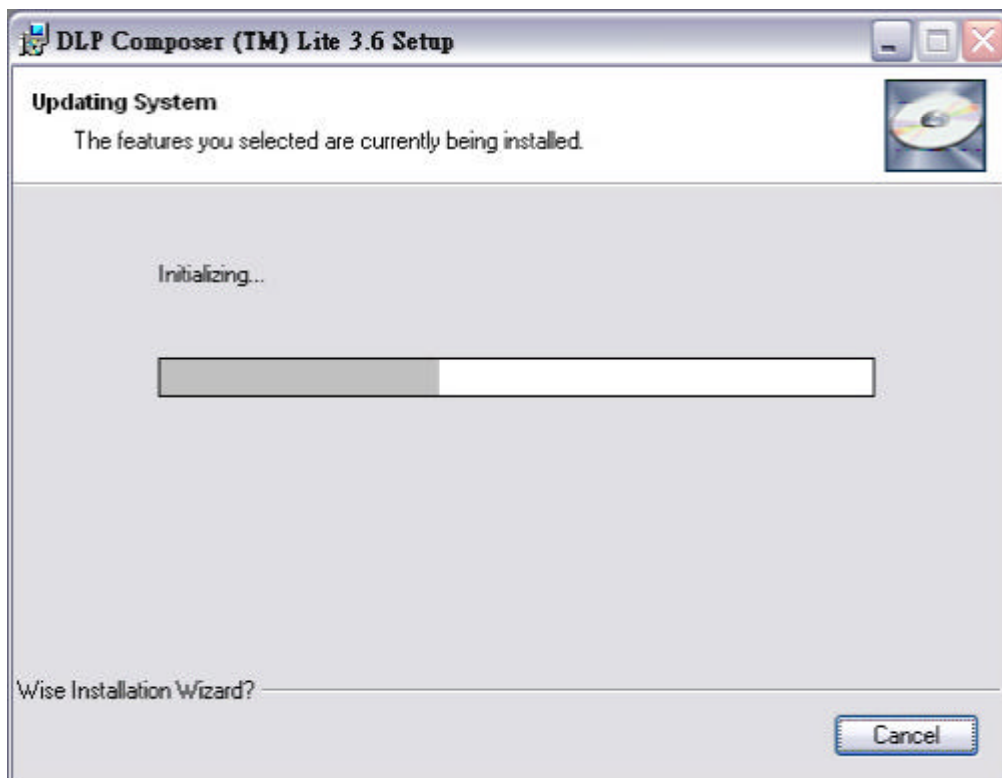
5. Choose "All" icon, then click "Next" button.



6. Click “Next” button.



7. The program is executing “Initializing” status.



5-3.2 USB Driver Upgrade Procedure

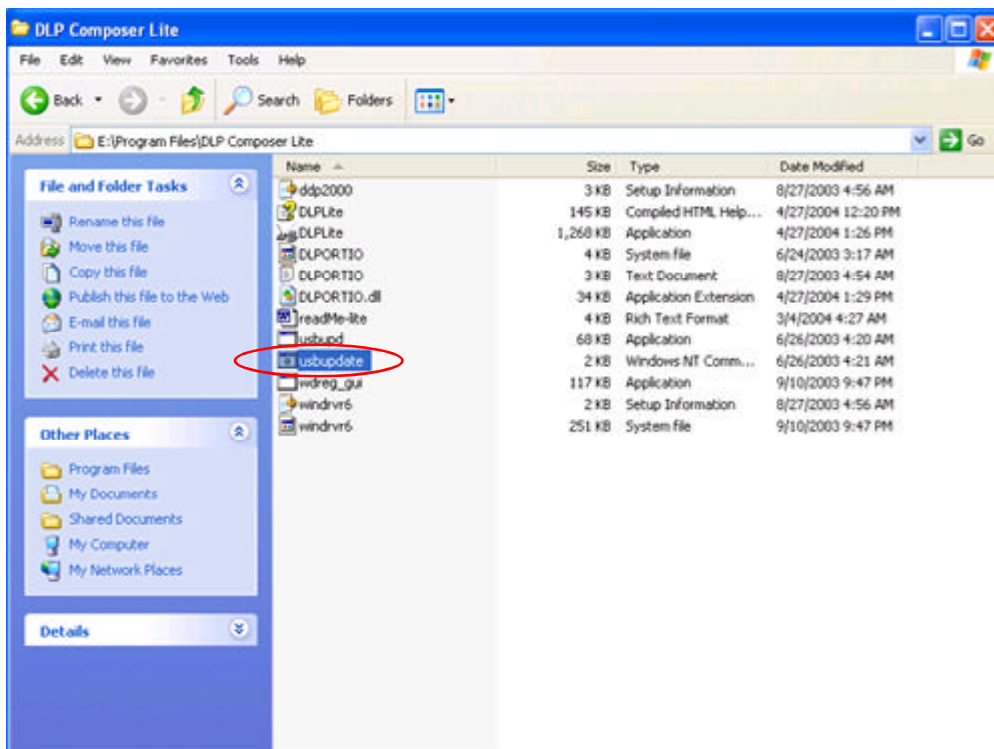
1. Press “” button on projector, and hold it.
2. Plug power cord and keep to hold “” button till the “power” LED light turns to green, “TEMP”, and “LAMP” LED light turn to red.



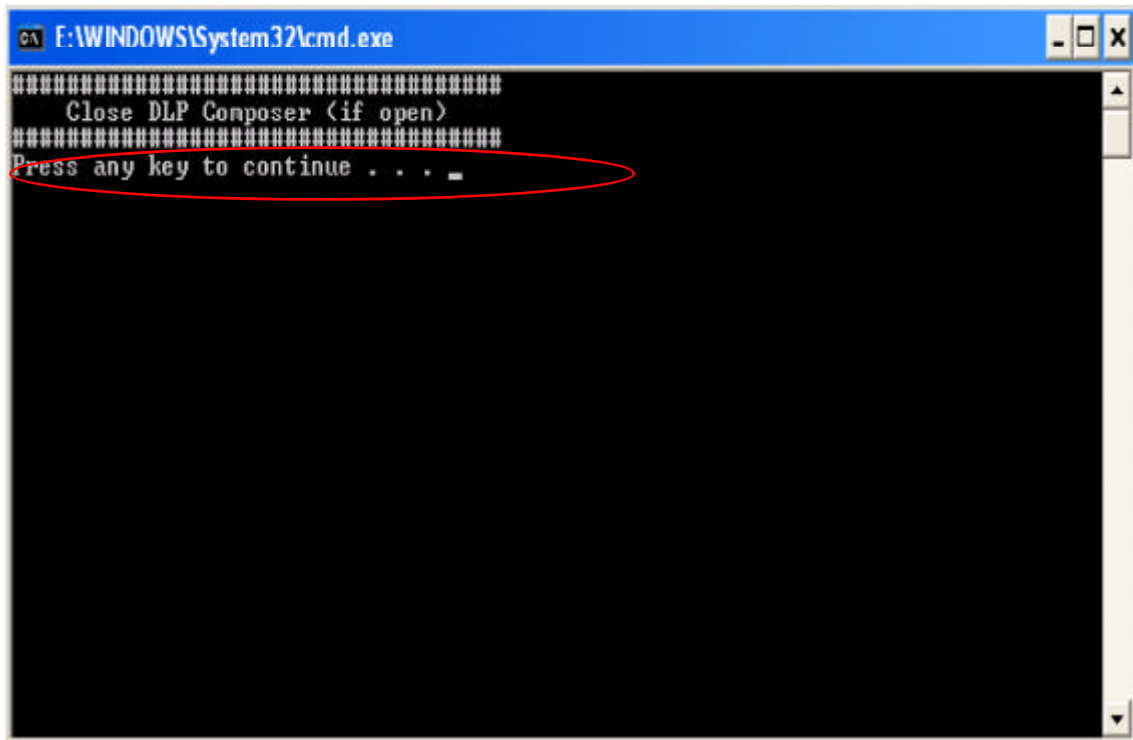
Press the button and hold it

3. Execute the C:\Program files\DLP Composer\usbupdata.cmd.

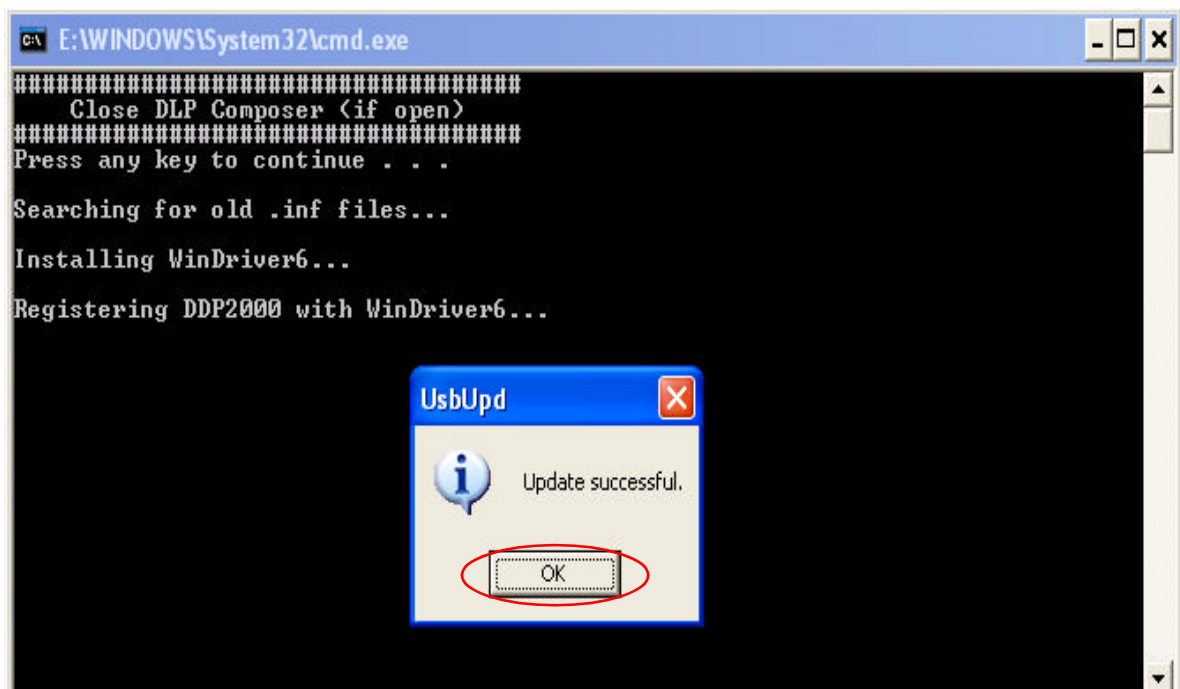
Note : The “DLP Composer” program must be closed first.



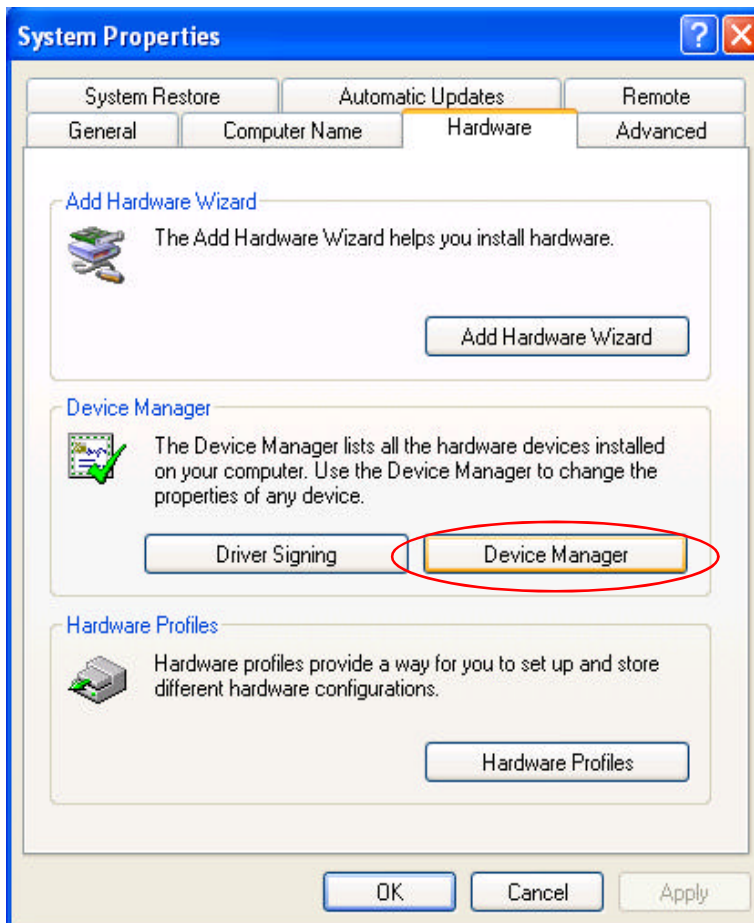
4. Type any key to continue. Then wait about a minute.



5. Click "OK". The USB driver updated successfully.

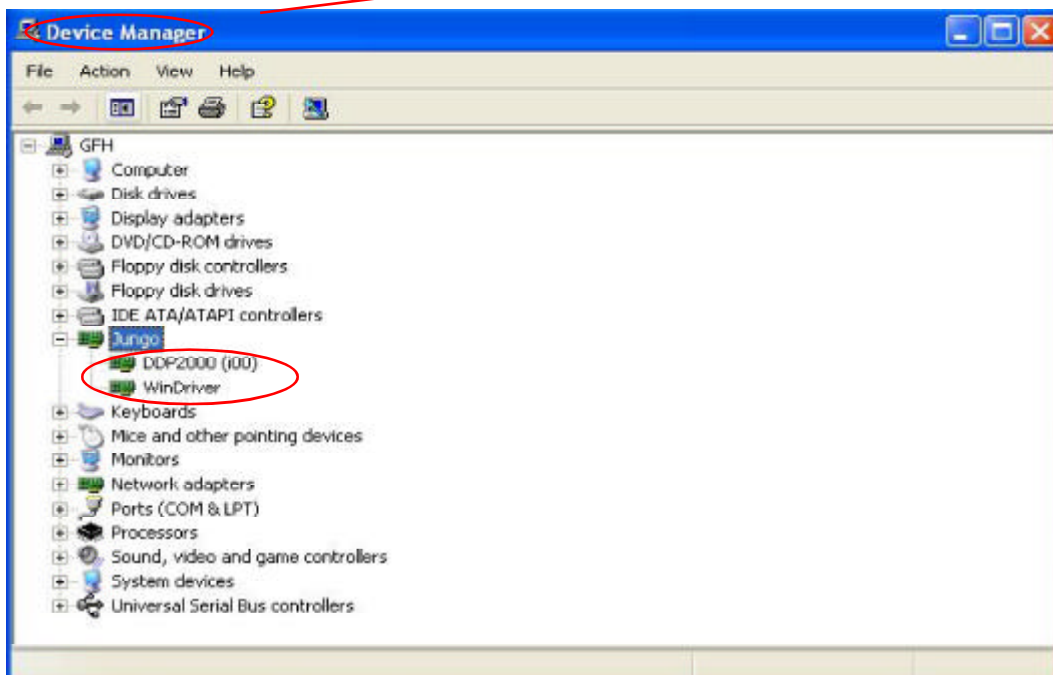


6. Right click “My Computer” on the desktop. Select “Properties” on the popup menu to launch the “System Properties” window. Choose “Hardware” and then click “Device Manager.”



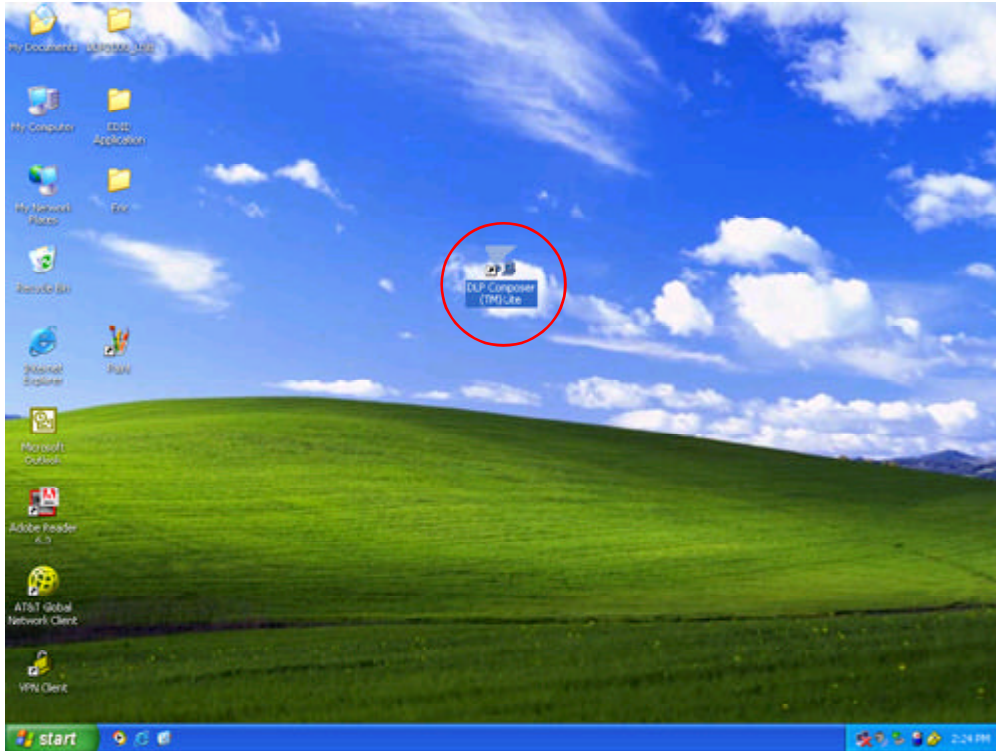
7. Click “Jungo” to assure “DDP2000” and “WinDriver” are properly installed. If not, repeat Step 1 ~ 6.

Device Manager

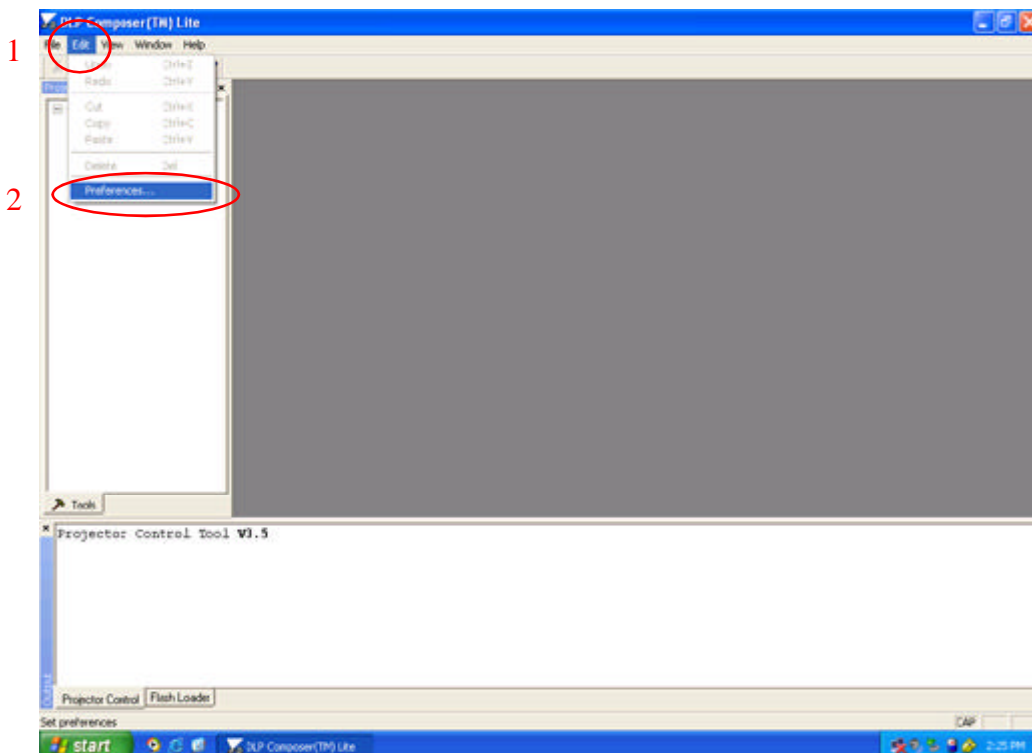


5-4 Firmware Upgrade Procedure

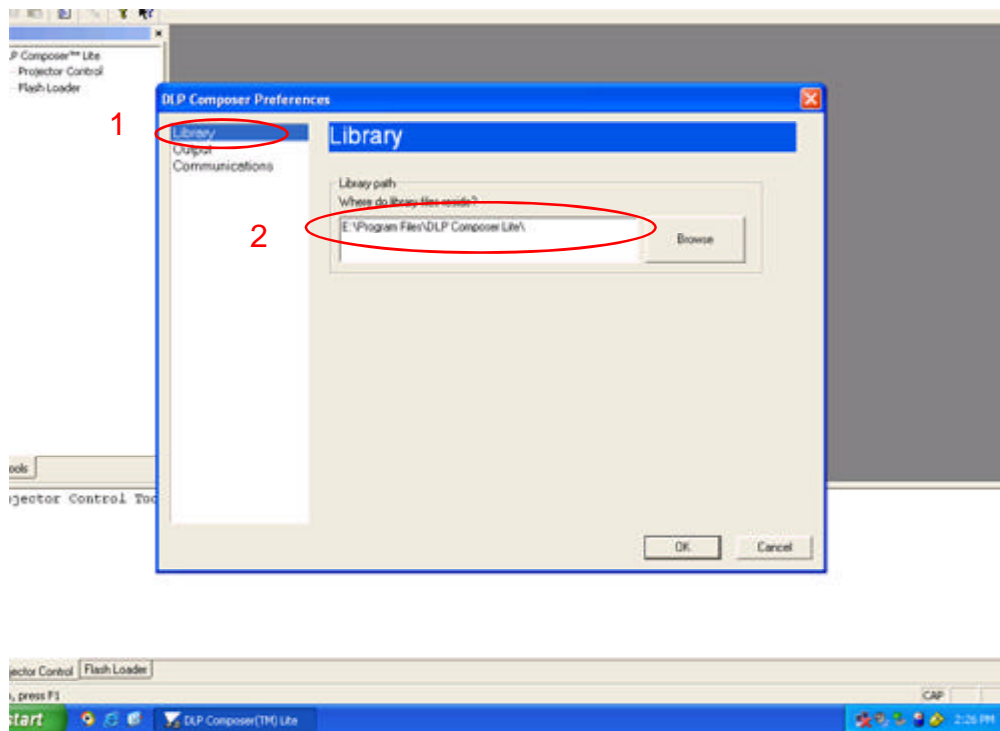
1. Execute the “DLP Composer™” file.



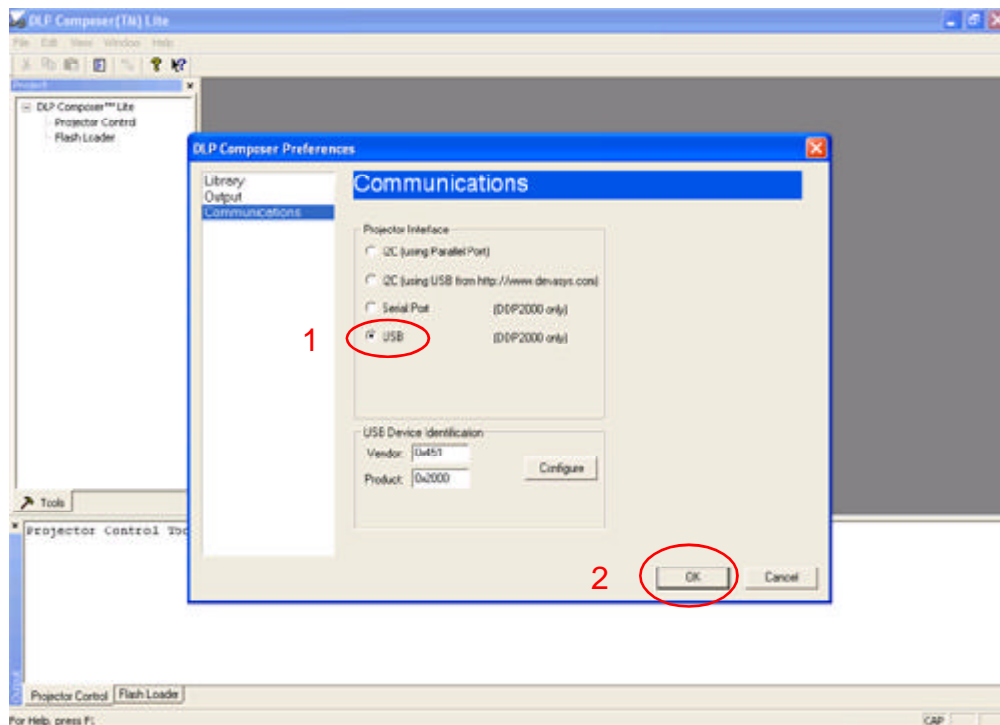
2. Click “Edit” and “Preferences”.



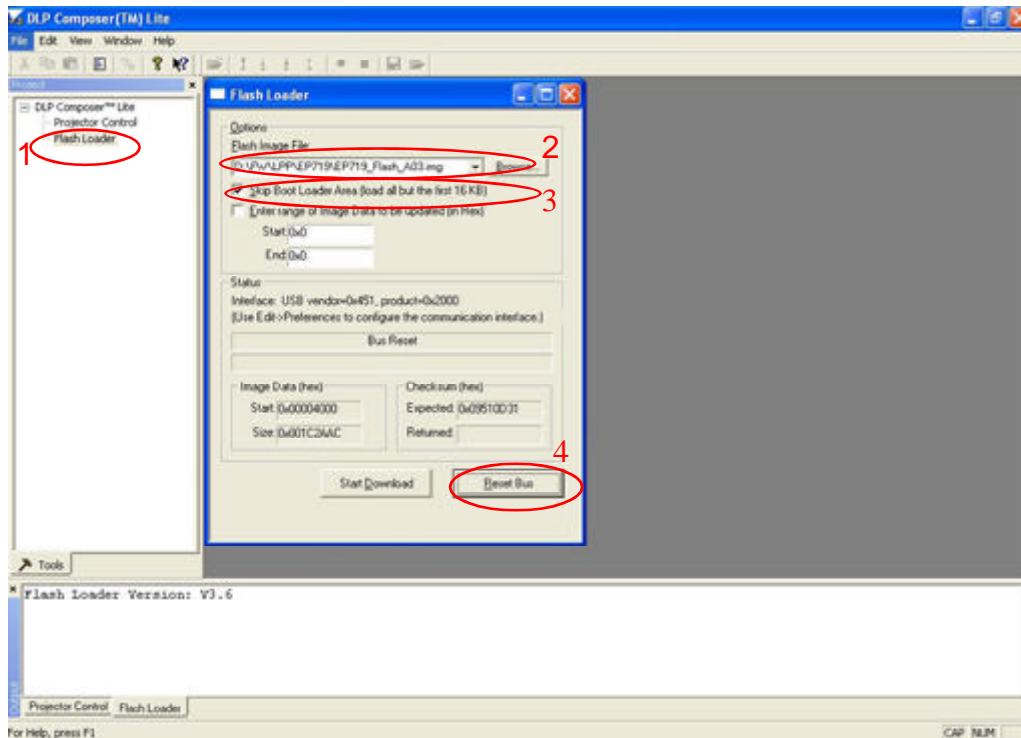
3. Click “Library”. The library path located to the default installation directory is :
C:\Program Files\DLP Composer. If not then press “Browse” to select the right path.



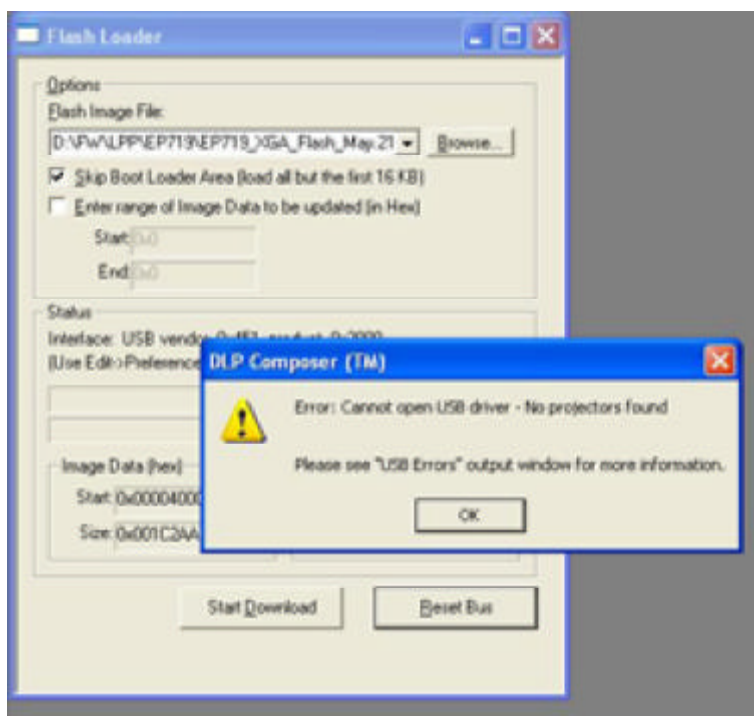
4. Select “Edit\Preferences\Communications”, choose “USB”, and then click “OK”.



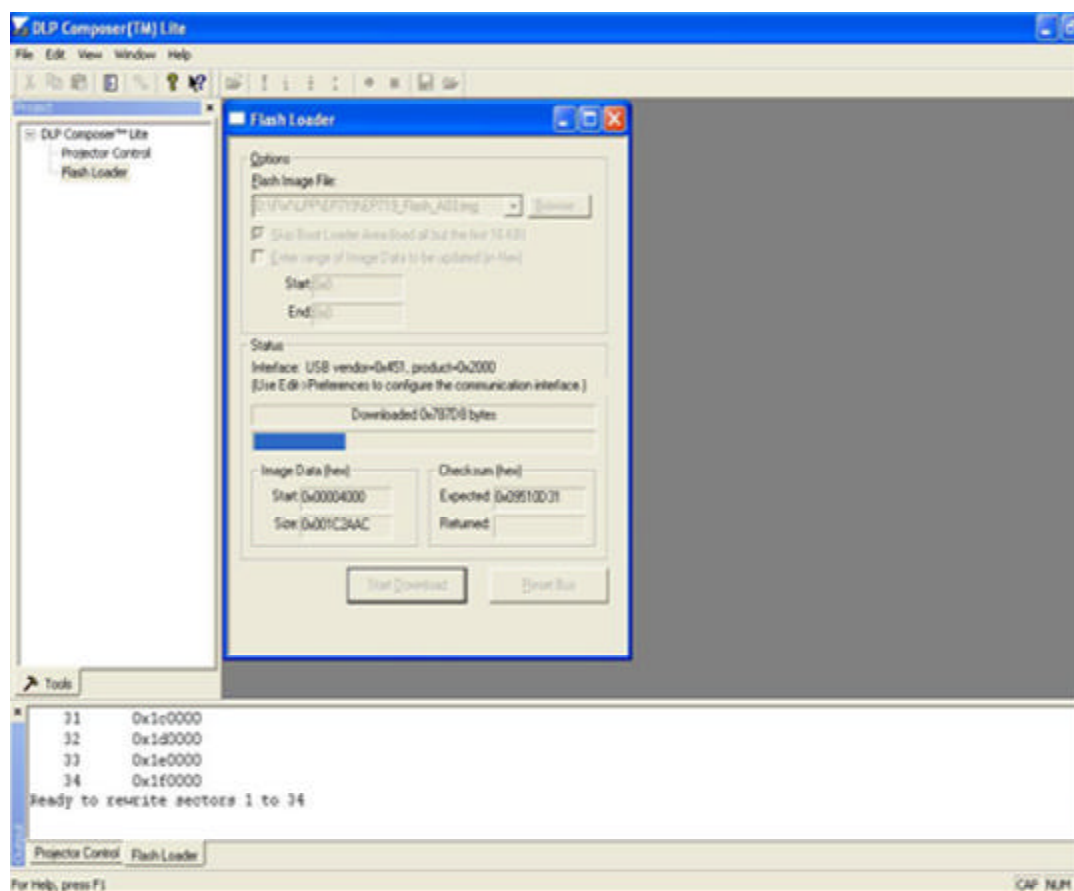
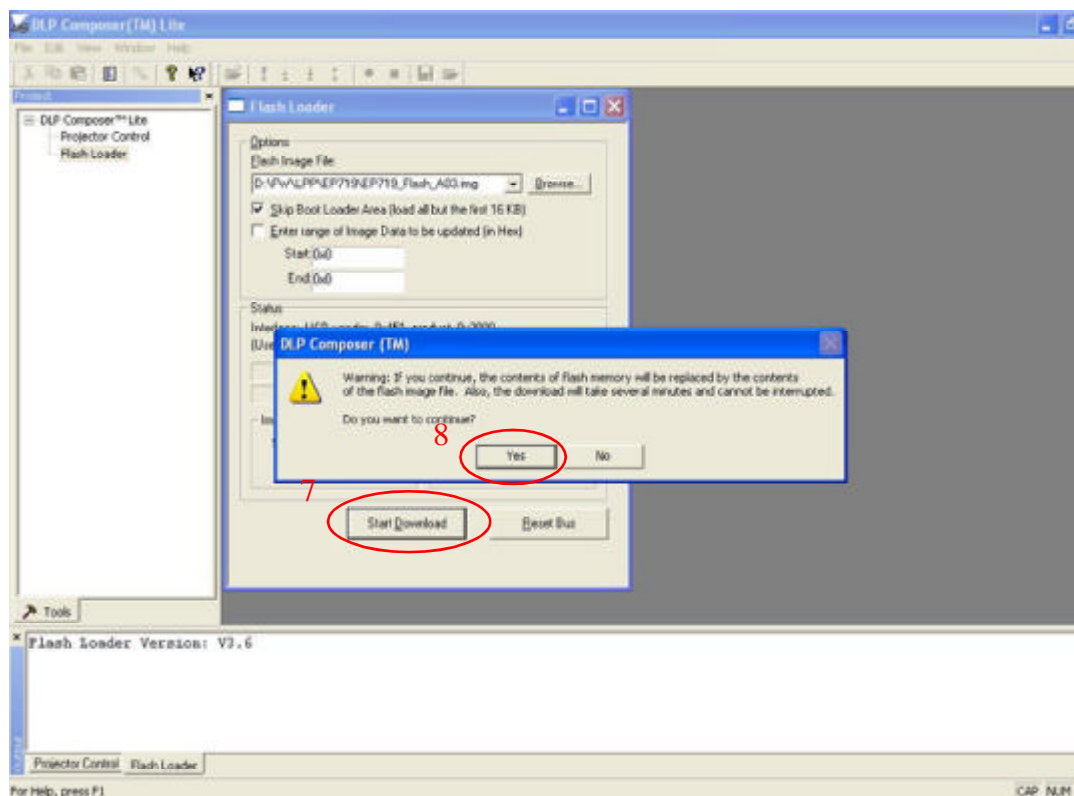
5. (1) Choose “Flash Loader”
- (2) Click “Browse” to search the “EP719_Flash_A03.img” file.
- (3) select the item “Skip Boot Loader Area(load all but the first 16KB)”.
- (4) Click “Reset Bus” to erase the flash memory



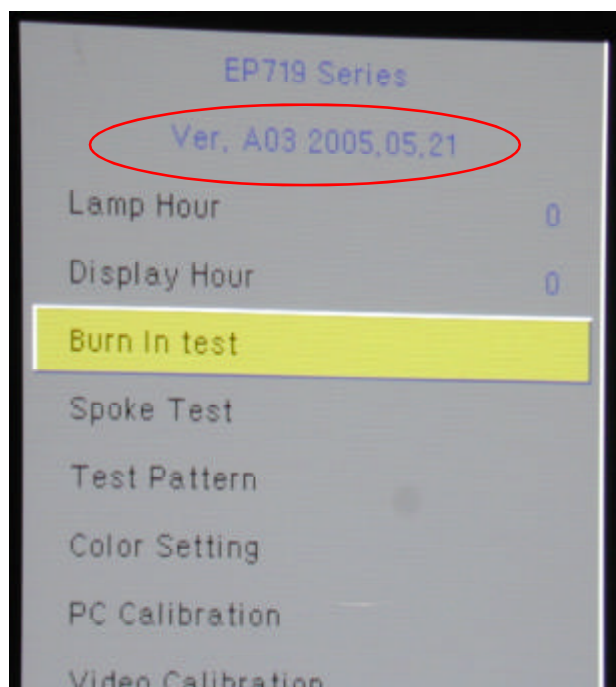
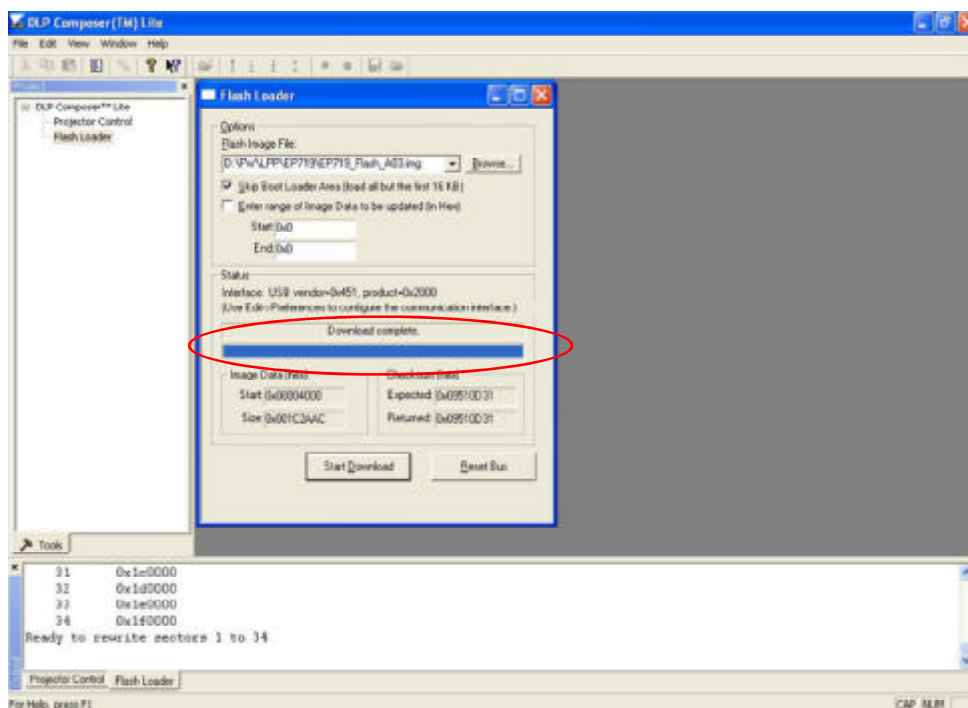
Note : If appears the error message “cannot open USB driver - No projectors found”.
Please unplug the USB cable and replug, then do step (4) again.



7. If the firmware is ready, then click “Start Download” to process the firmware upgrade.
8. Click “Yes” to erase the flash memory.



9. After file was download. EP719 will be back to standby status automatically (Power LED flash green). Please to restart the unit and enter the **Service mode** to check the F/W version of EP719 . **Note**



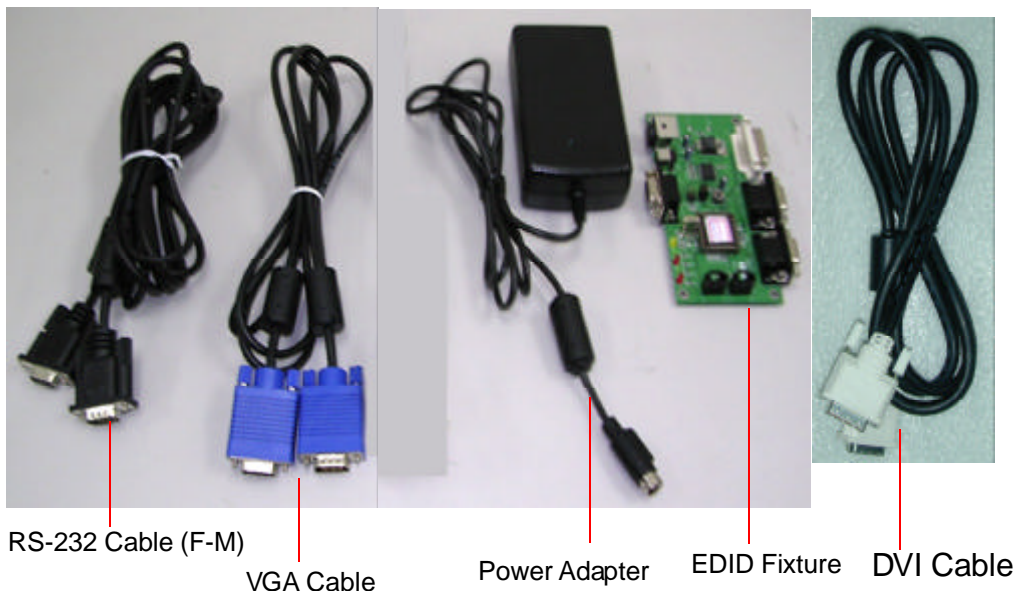
Note : How to into Service Mode:

- step 1. Turn on the power and wait for the disappearance of Logo picture.
- step 2. Do the following action sequentially to enter Service Mode Menu
 - (1) press "power" button
 - (2) press "◀ (source)" button twice
 - (3) press "menu" button

EDID Key-in Procedure

6-1 Equipment Needed

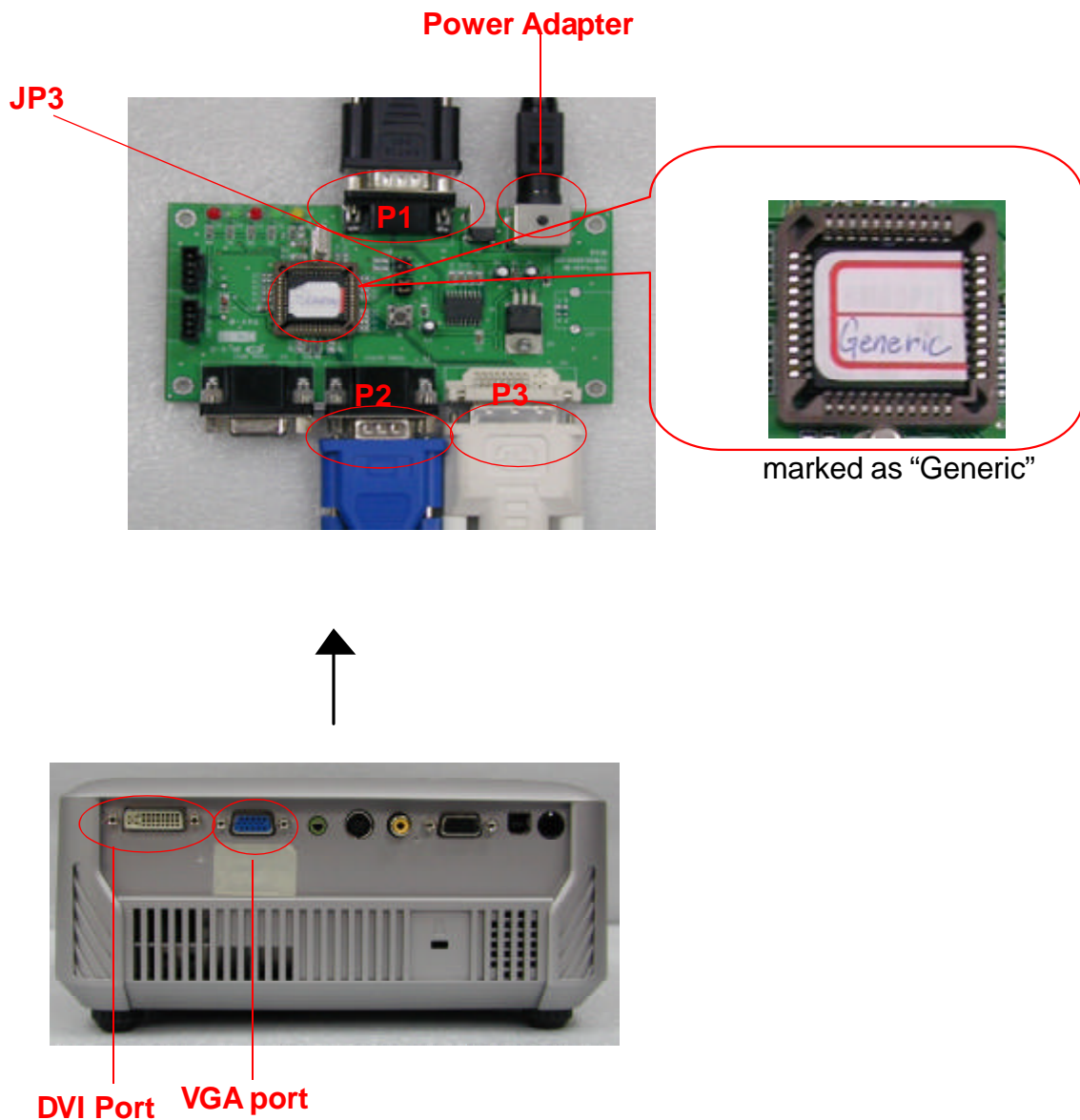
- PC or Laptop
- EDID Fixture
- Power Adapter
- RS-232 Cable (Female to Male)
- VGA Cable
- DVI Cable
- Power Cord
- DDC Driver
- EP719 / EP716 Unit



6-2 Setup Procedure

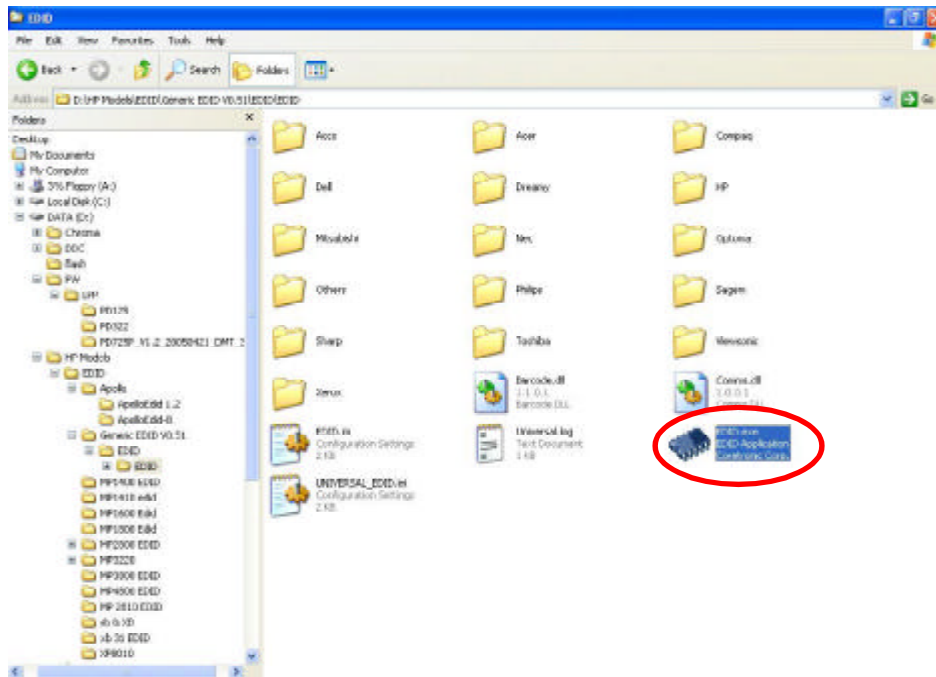
- Step1. Connect Power Adapter with the fixture.
- Step2. Connect P1 of the fixture with COM1 of PC/Laptop by RS232 cable.
- Step3. Connect P2 of the fixture with VGA port of EP719 / EP716 by VGA cable.
- Step4. Connect P3 of the fixture with DVI Port of EP719 / EP716 by DVI cable
- Step5. Plug Power Adapter to the fixture and connect the EP719 / EP716 Power Cord.

*Notice : Confirm JP3 is "Close" status.

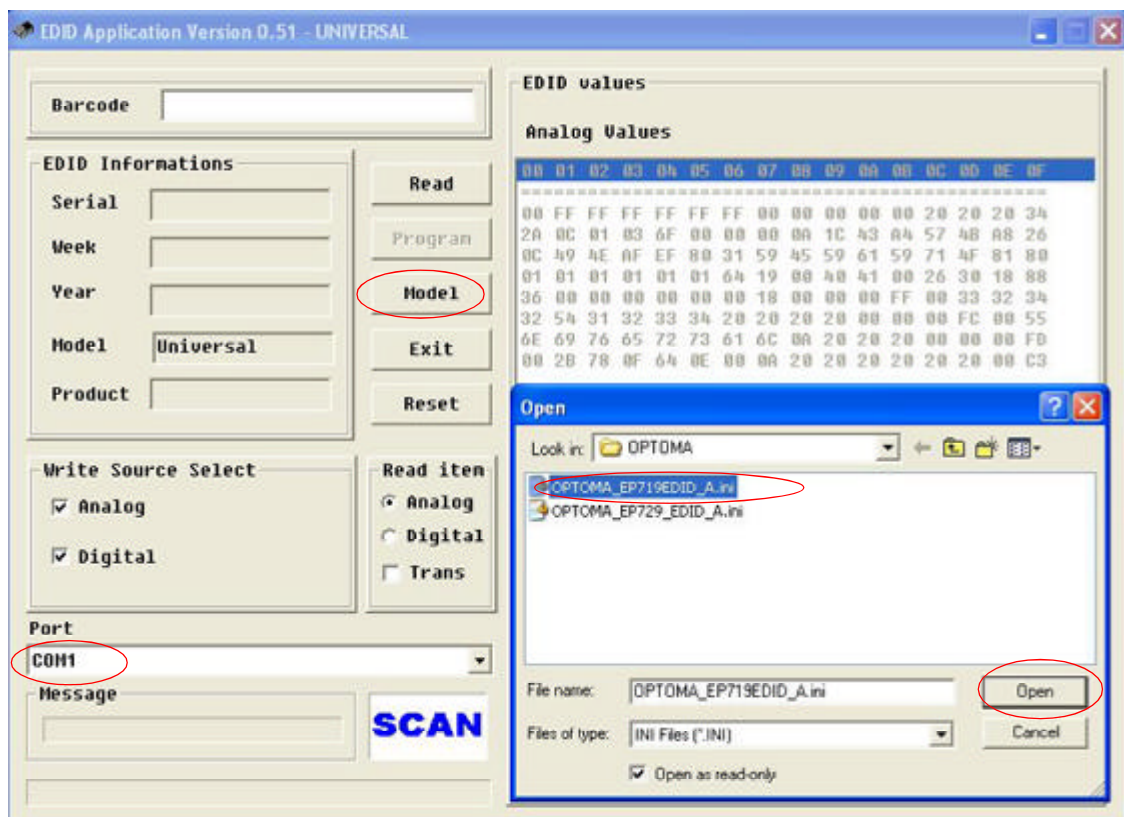


6-3 EDID Key-in Procedure

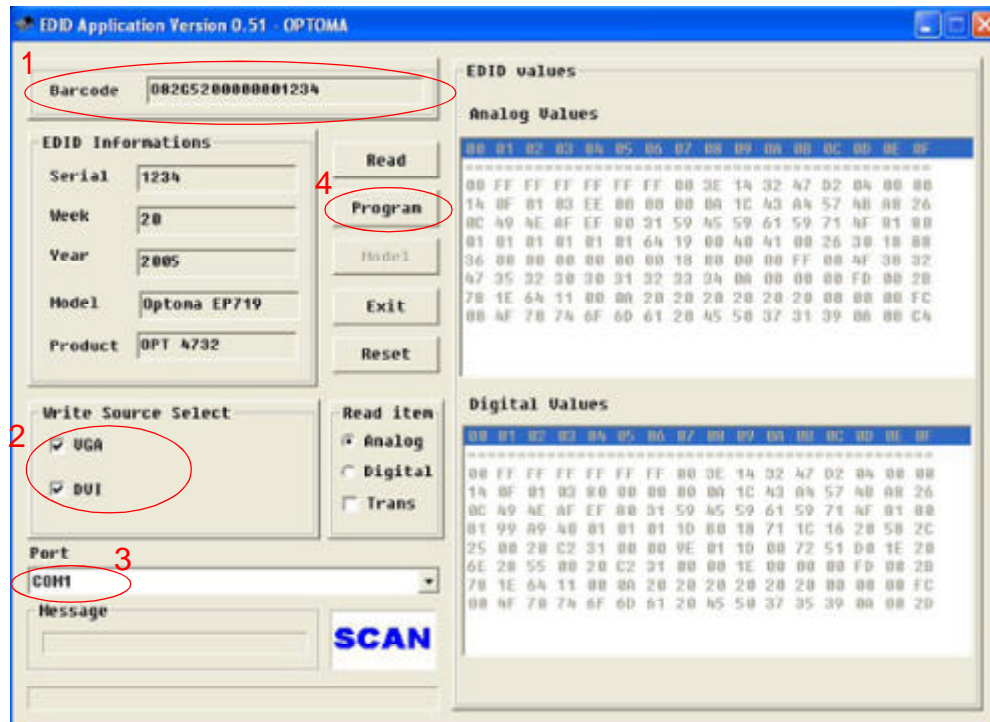
Step 1. Execute “EDID” program.



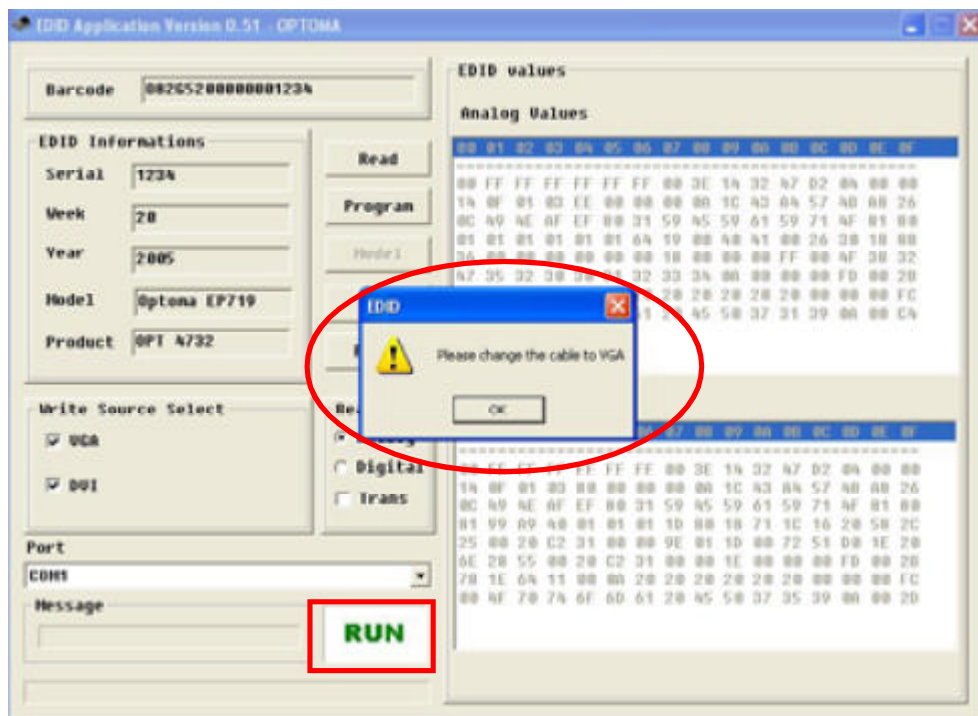
Step 2. (1) Check the Com port is “COM1”
(2) Click the “Model” item
(3) Choose the source file “OPTOMA_EP719EDID_A.ini” and then open it.



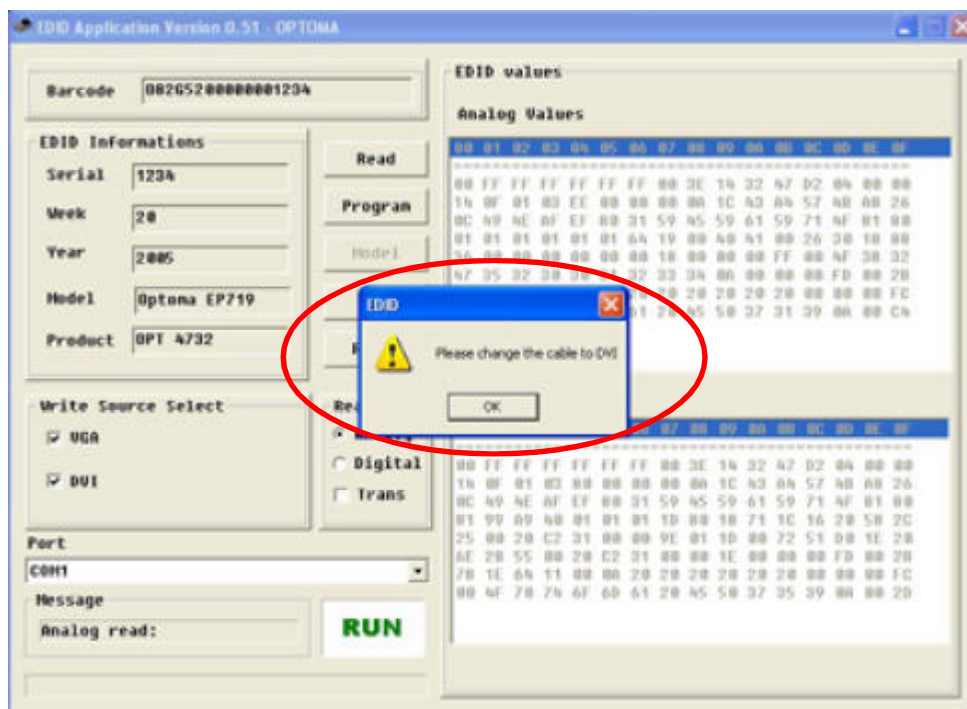
- Step 3.
- (1) Key in the Serial Number into the blank space.
 - (2) In “Write Source Select” Item, select “VGA” and “DVI” both.
 - (3) Check the COM port is COM1
 - (4) Click “Program” button.



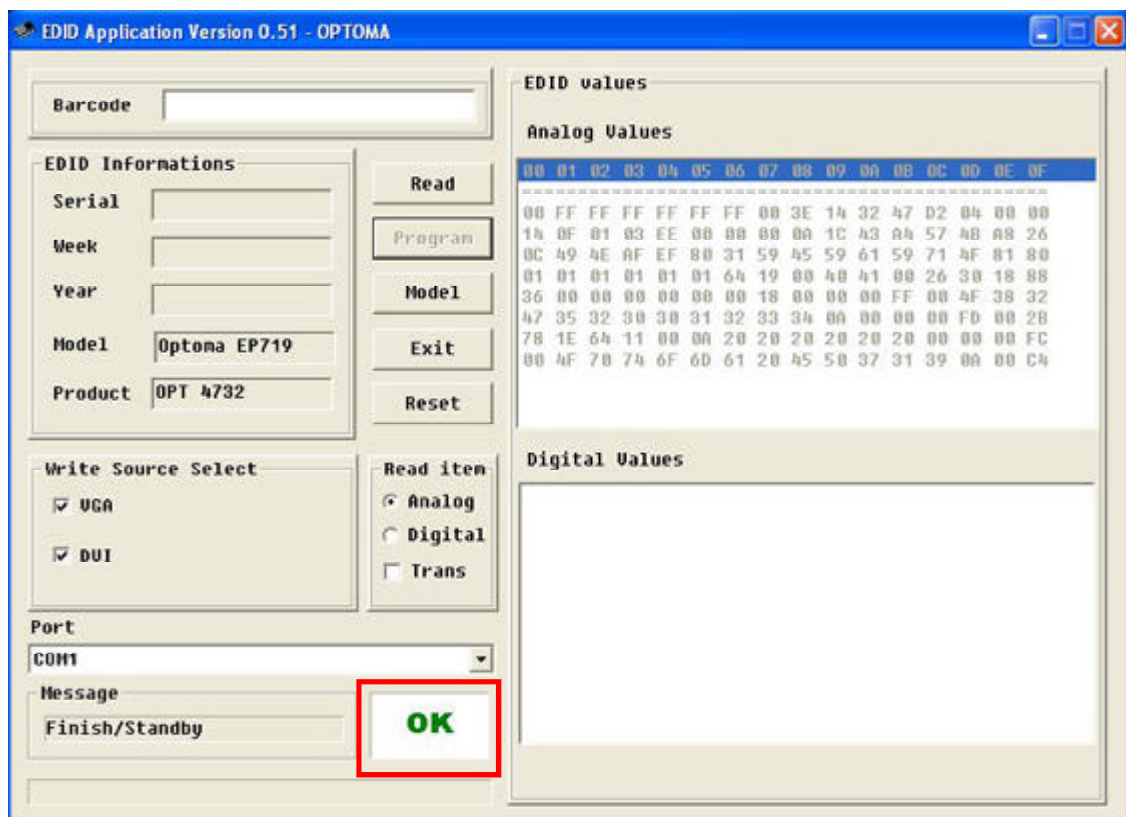
- Step 4.
- “Please change the cable to VGA” message is shown on the screen, then click “OK” button.
- Notice : “RUN” message will appear on the screen.



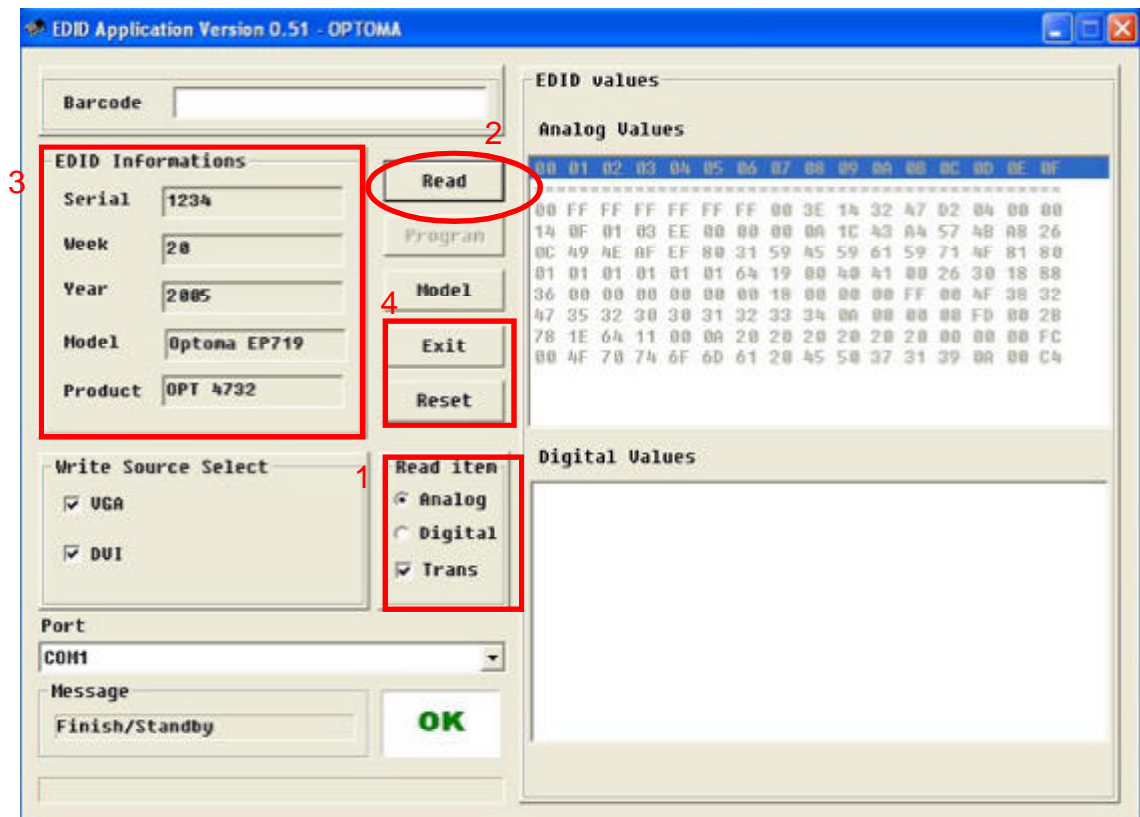
- Step 5. “Please change the cable to DVI” message is shown on the screen, then click “OK” button”.



- Step 6. When the EP719 EDID program is finish, the “OK” message will appear on the screen.



- Step 7.
- (1) Make sure to check "Analog", "Digital" and "Trans" in Read item
 - (2) press "Read" button.
 - (3) **EDID Informations** will show the result.
 - (4) Click "Reset" to do the next unit or "Exit" button to close the EDID program.



Appendix A

Different Part Table

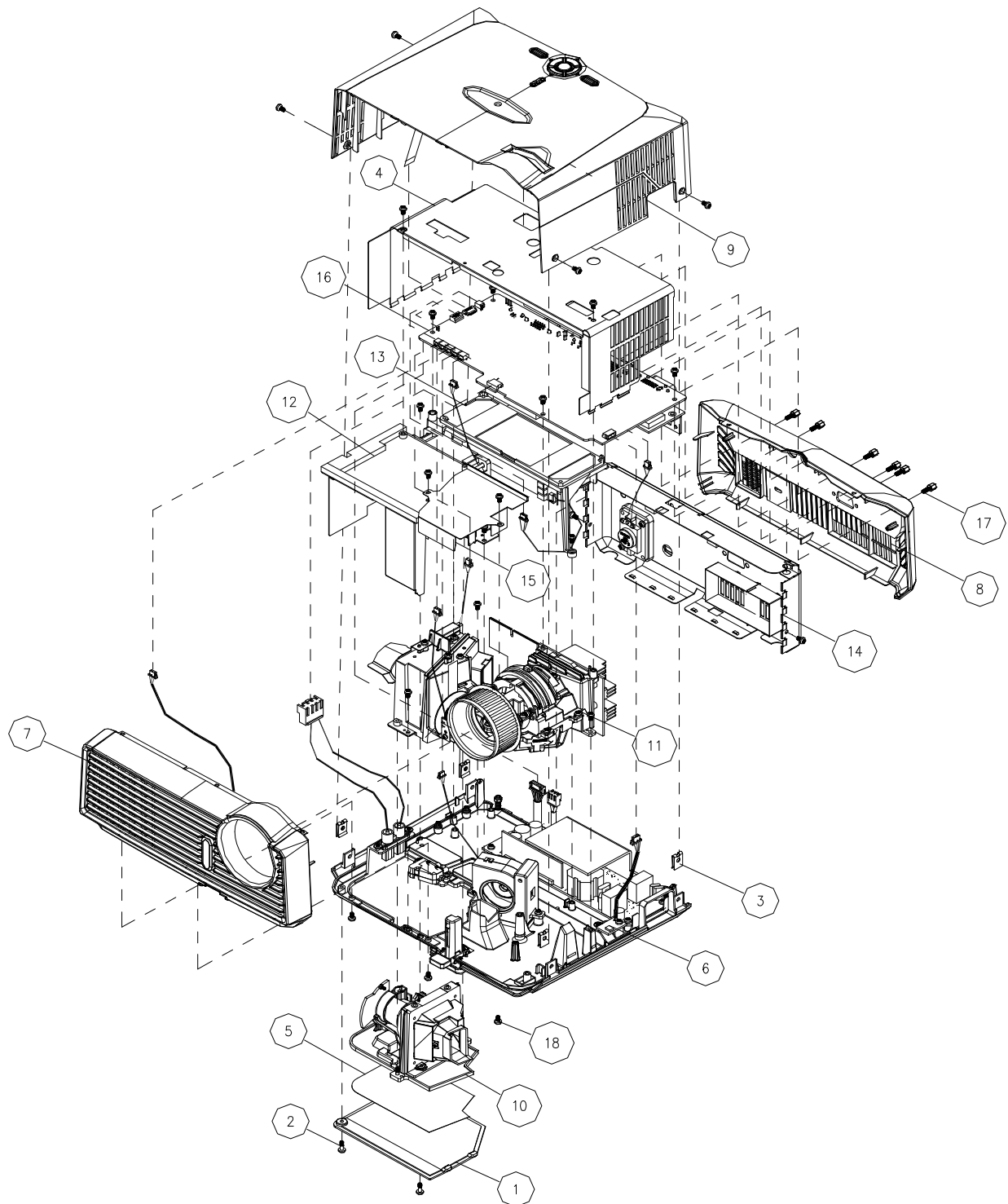
(EP716 / EP719 / EP716R / EP719R / EP716P / EP719P)

Description	Area	America		Taiwan				Europe		Mexico
	P/N	EP716R	EP719R	EP719	EP716	EP716P	EP719P	EP716R	EP719R	EP716MX
SCREW PAN MECH M3*5 Ni	85.1A123G050	V	V	V	V	V	V	V	V	
SCREW PAN MECH M3*5 Ni	85.1A123.050									V
SCREW HEX I/O #4-40 H4*L8 Ni NYLOK	85.005AGG408	V	V	V	V	V	V	V	V	
SCREW HEX I/O #4-40 H4xL8 Ni Nyllok	85.005AG.408									V
BACK COVER PC MN3600H EP716R	51.82G04G072	V				V		V		
BACK COVER PC+ABS C6200 EP7190	51.82G04G001			V						
BACK COVER PC MN3600H EP719AR/EP719ER	51.82G04G062		V				V		V	
BACK COVER PC+ABS C6200 EP716	51.82G04G021				V					V
FFC Cable 14P 100mm EP719	42.82G02G003	V			V	V		V		V
CABLE FFC 14P 100mm EP719	42.82G02G001		V	V			V		V	
TOP COVER PC+ABS C6200 EP716	51.82G01G021	V			V	V		V		V
TOP COVER PC+ABS C6200 EP7190 "GREEN"	51.82G01G001		V	V			V		V	
DMD 800*600 PIXEL DDR FTP 0.55" SVGA	48.859DMGD13	V			V	V		V		V
DMD 1024*768 PIXEL DDR FTP 0.55" XGA	48.82GDMGD01		V	V			V		V	
PCBA MAIN BOARD EP716	80.82M01G002				V					V
PCBA MAIN BOARD EP716	80.82M01G001	V				V		V		
PCBA MAIN BOARD EP719ER	80.82G10G002						V		V	
PCBA MAIN BOARD EP719AR	80.82G10G001		V							
PCBA MAIN BOARD EP719 EUROPE	80.82G01G004			V						
CABLE POWER CORD 1830mm SP-023+IS14 EUR.	42.50112.001							V	V	
CABLE POWER CORD 1830MM SP30+IS14 "GREEN"	42.50115G001	V	V							
CABLE POWER CORD 1830mm (BSMI)	42.50115G004			V	V	V	V			
CABLE POWER CORE 11m EP732H	42.80V06.001									V
USER'S GUIDE MULTILINGUAL (CD) EP716R	36.82M01G002	V	V			V	V	V	V	
EP719 USER GUIDE (CD)	36.82G01G001			V						
EP716 USER GUIDE (CD)	36.82M01G001				V					V
INFRARED REMOTE CONTROL W/DVI BUTTON EP719	45.82G01.001		V							
INFRARED REMOTE CONTROL W/2nd VGA BUTTON EP719	45.82G01.002	V		V	V	V	V	V	V	V
PE BAG 21PPER 280*200*0.04 #9	51.80136G001				V		V	V		
PEBAG ZIPPER #3 100*70*0.04 LMT-5020	51.52121.001									V
PE BAG 380(L)*310(W)*0.07mm	51.00174G001	V	V	V		V			V	
LABEL FOR IO CONNECTOR EP719 (EUROPE)	35.82G01G011			V						
LABEL FOR IO CONNECTOR EP716	35.82G01G021				V					V
LABEL FOR IO CONNECTOR RS232 EP716R	35.82G06G011	V								
LABEL FOR IO CONNECTOR RS232 EP719 (AMERICA)	35.82G05G001		V				V		V	

Appendix B

Exploded Overview

I. EP719 Unit

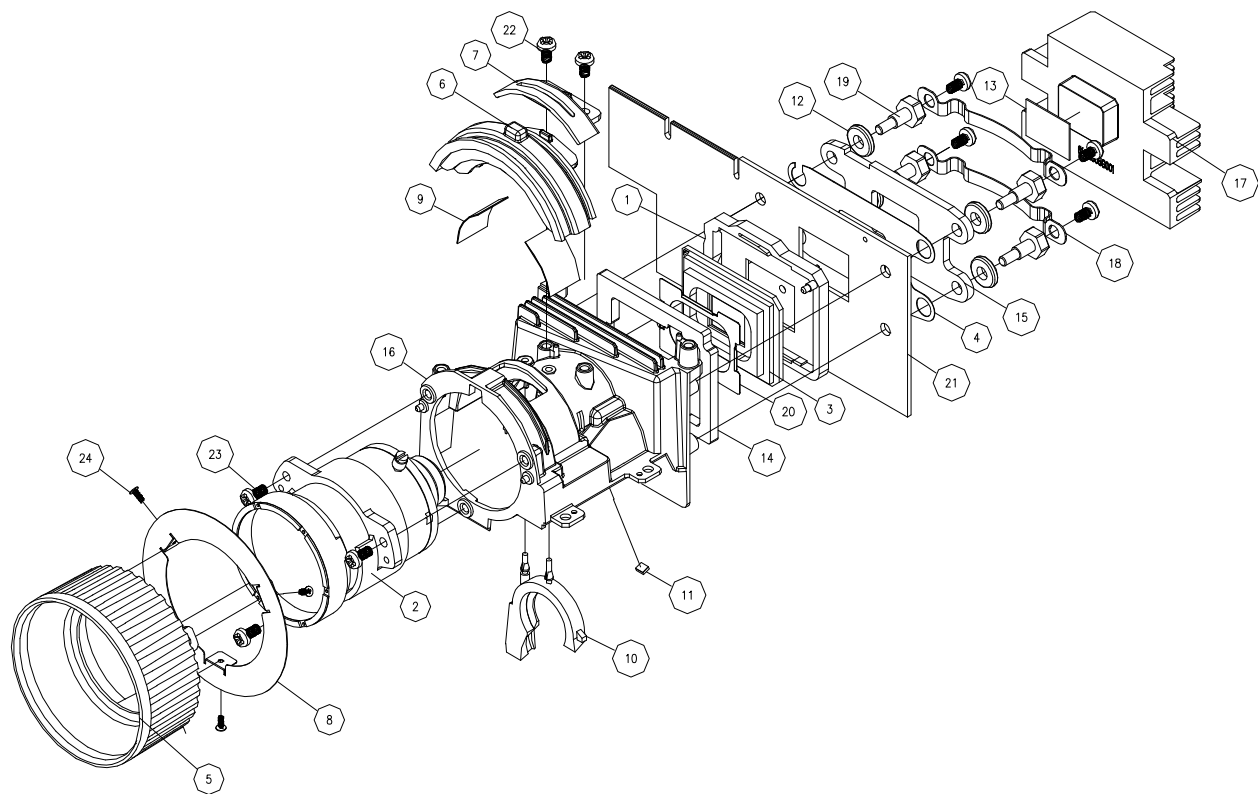


Exploded Parts List

Item	Part No	Description
1	51.82G05G001	LAMP COVER NORYL N300 EP7190 "GREEN"
2	61.80511.001	SCREW PAN MECH M3*8-4 BLACK
3	61.81105.001	NUT PLATE SUS 0.5t EzPro 610
4	61.82G25G001	EMI SHIELDING FRONT PLATE AL 0.3t EP7190 "GREEN"
5	61.82G28G001	LAMP COVER AL FOIL 0.1t EP719 "GREEN"
6	70.82G01G001	ASSY BOTTOM HOUSING MODULE EP7190 "GREEN"
7	70.82G02G001	ASSY FRONT COVER MODULE EP7190
8	70.82G03G001	ASSY BACK COVER MODULE EP7190
9	70.82G04G001	ASSY TOP COVER MODULE EP7190 "GREEN"
10	70.82G09G001	ASSY LAMP MODULE EP7190
11	70.82G12G001	ASSY ENGINE MODULE EP7190 "GREEN"
12	70.82G18G001	ASSY AXIAL FAN MODULE EP7190 "GREEN"
13	70.82G19G001	ASSY LAMP DRIVER MODULE EP7190
14	70.82G20G001	ASSY EMI GROUND PLATE MDULE EP719
15	75.82G07G001	BUY ASSY EMI FRONT PLATE EP719
16	80.82G01G001	PCBA MAIN BOARD EP719 "GREEN"
17	85.005AG.408	SCREW HEX I/O #4-40 H4xL8 Ni NYLOK
18	85.1A123.050	SCREW PAN MECH M3*5 NI

Note: Please refer to RSPL for updated Part Number.

II. ENGINE TOP COVER MODULE

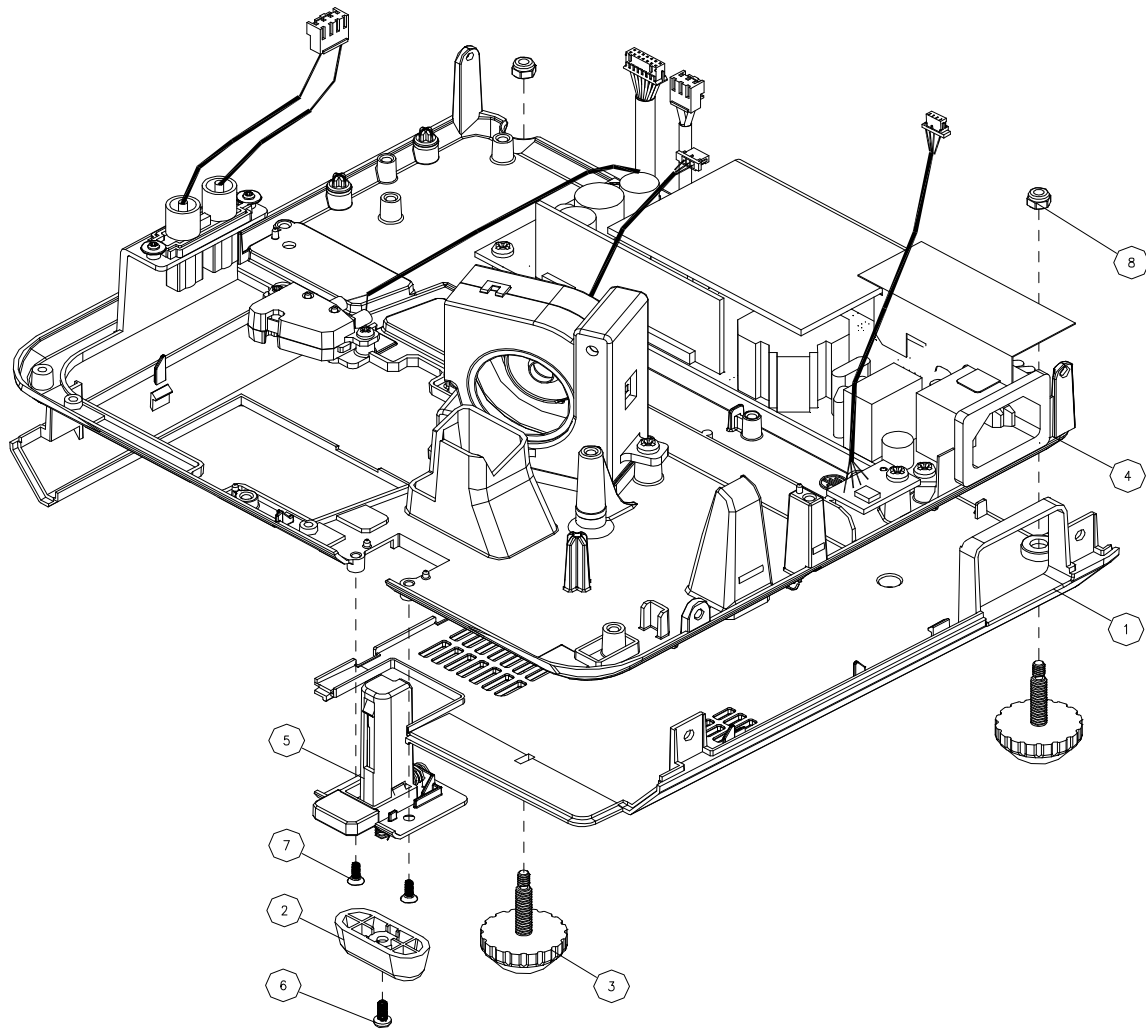


Exploded Parts List

Item	Part No	Description
1	11.009F0G005	CNNT F 166P FOR 0.55" SVGA LGA DMD SOCKET;FOXCONN
2	23.82G01G001	ALL SPHERICAL GLASS 1.10 ZOOM LENS YO
3	48.82GDMGD01	DMD 1024X768 PIXEL DDR 0.7" XGA
4	51.80B31G001	DMD INSULATOR MYLAR .8t 3300MP
5	51.82G06G001	FOCUS RING PC+ABS C6200 EP7190 "GREEN"
6	51.82G07G001	ZOOM RING PC+ABS C6200 EP7190 "GREEN"
7	51.82G08G001	ZOOM RING ORBIT PC+ABS C6200 EP7190 "GREEN"
8	51.82G21G001	FOCUS RING LIGHTCUT MYLAR EP7190 "GREEN"
9	51.82G22G001	ZOOM ANTI-ABRASION TEFLON EP7190 "GREEN"
10	52.82G03G002	RELAY SEALED RUBBER-2 EP719
11	52.82G10G001	RELAY CUSHION RUBBER EP7190 "GREEN"
12	52.87130G001	RUBBER BLOWER 595925 "GREEN"
13	52.87319G001	DMD THERMAL PAD 18*13*0.5t "GREEN"
14	52.89627G002	DMD SEAL RUBBER BF1000 3.2t EP719
15	61.80J48G001	DMD HEATSINK BACKER PLATE 739 AL6061 "GREEN"
16	61.82G02G001	ENGINE TOP COVER Mg Alloy-AZ91D EP7190
17	61.82G05G001	DMD HEATSINK AL EP7190 "GREEN"
18	61.88608G001	DMD HEATSINK SPRING PLATE SUS301 0.4t lvy10X
19	61.88611G001	DMD SCREW lvy10X "GREEN"
20	61.89643G001	DMD MASK PLATE SUS301 0.15t EP759
21	80.82G02G001	PCBA DMD BOARD EP7190
22	85.1A123.050	SCREW PAN MECH M3*5 NI
23	85.1A123.060	SCREW PAN MECH M3*6 Ni
24	85.YA321G051	SCREW FLAT HEAD TAP M1.7*5 BLACK

Note: Please refer to RSPL for updated Part Number.

III. BOTTOM HOUSING MODULE

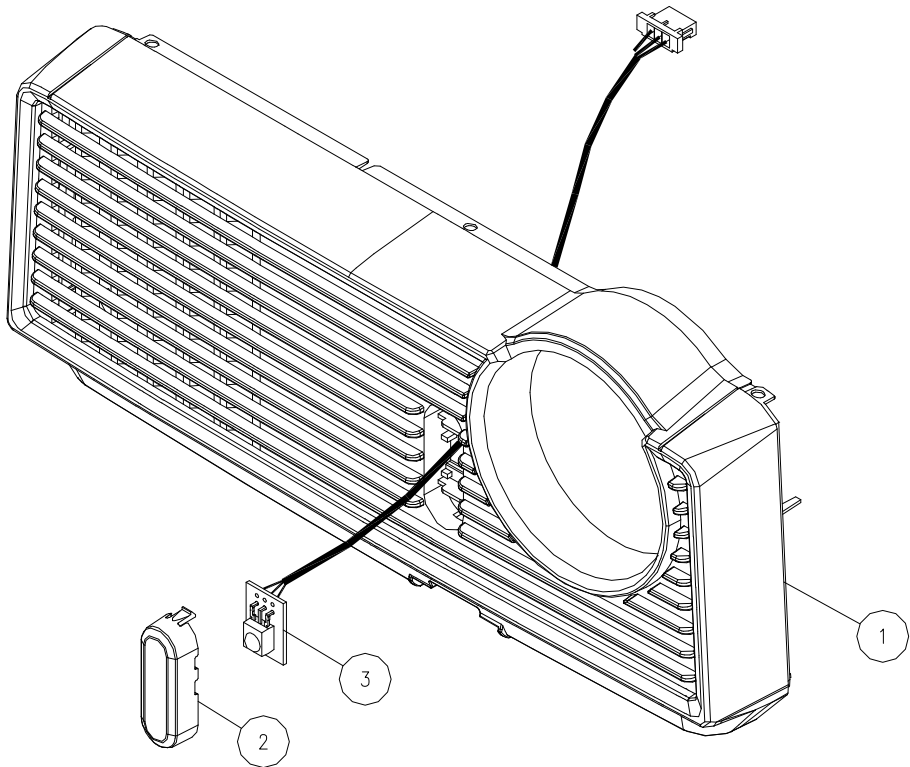


Exploded Parts List

Item	Part No	Description
1	51.82G02G001	BOTTOM COVER PC+ABS C6200 EP7190
2	51.82G16G001	ELEVATOR FOOT PC+ABS C6200 DP725
3	52.89601.001	ADJUST FOOT RUBBER EP759
4	70.82G06G001	ASSY BASE PLATE MODULE EP7190
5	70.82G07G001	ASSY ELEVATOR MODULE EP7190
6	85.1A326.060	SCREW PAN HEAD MECH M2.6*6 BLACK
7	85.4A326.060	SCREW PAN HEAD MECH M2.6*6 BLACK
8	86.0A523.040	HEX NUT W/MYLON M3*0.5 L4.0 WHITE

Note: Please refer to RSPL for updated Part Number.

IV. FRONT COVER MODULE

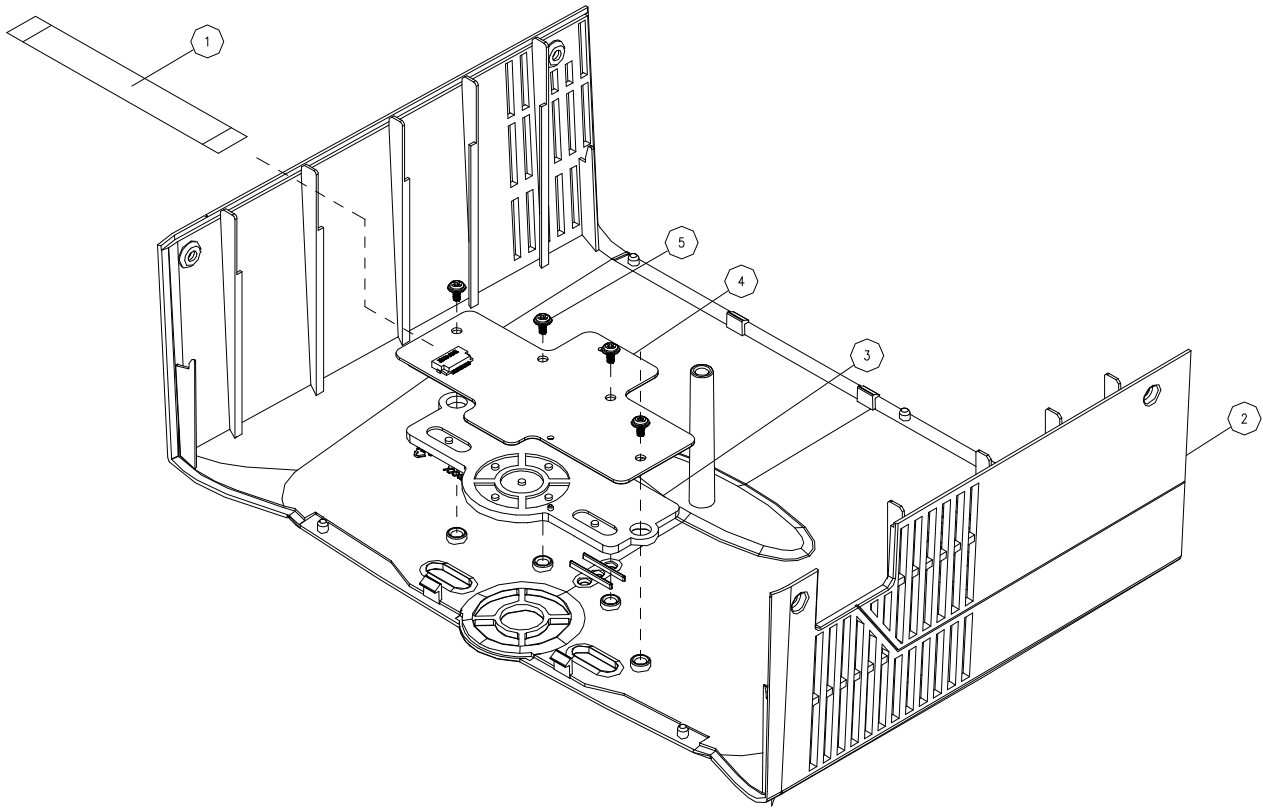


Exploded Parts List

Item	Part No	Description
1	51.82G03G001	FRONT COVER PC+ABS6410 EP7190
2	51.82G09G001	IR LENS FRONT PC EP7190
3	80.82G05G001	PCBA IR BD FOR EP7190

Note: Please refer to RSPL for updated Part Number.

V. TOP COVER MODULE

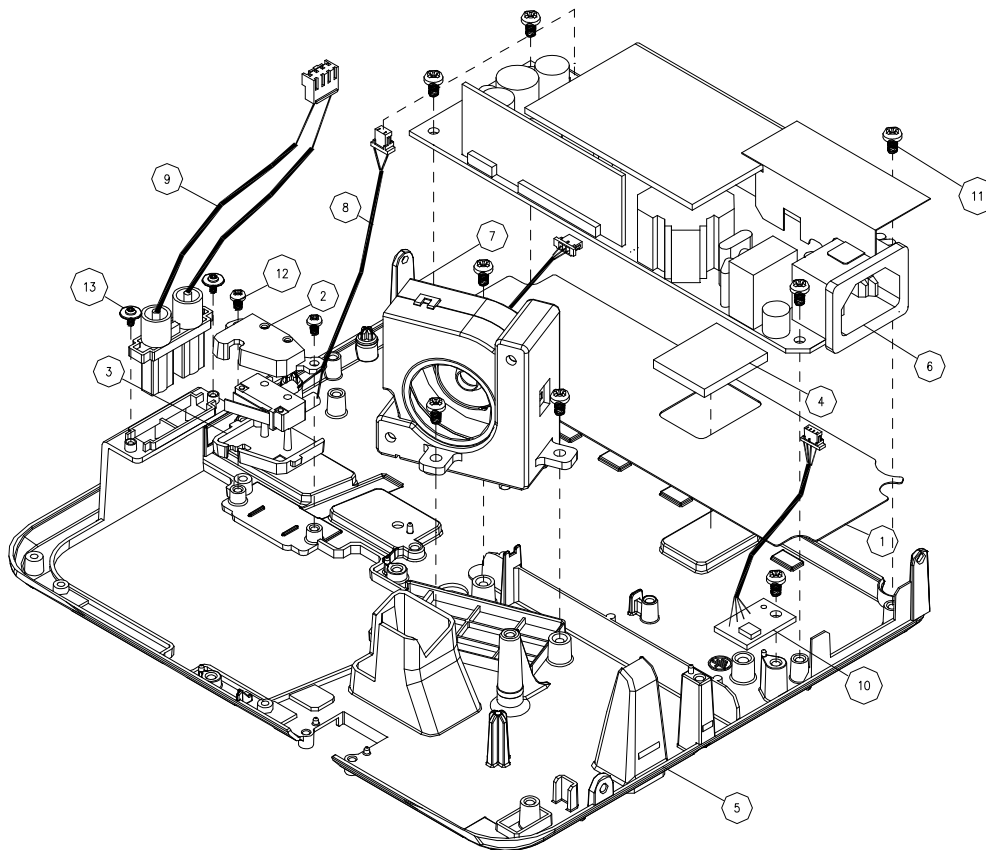


Exploded Parts List

Item	Part No	Description
1	42.82G02G001	CABLE FFC 14P 100mm EP719
2	42.82G02G001	TOP COVER PC+ABS C6200 EP7190
3	52.82G01G001	KEYPAD LED LENS RUBBER EP7190 "GREEN"
4	80.82G03G001	PCBA KEYPAD BOARD EP719 "GREEN"
5	85.1D122.040	SCREW PAN MECH M2*4 Ni (W/WASHER D5.0)

Note: Please refer to RSPL for updated Part Number.

V. BASE PLATE MODULE

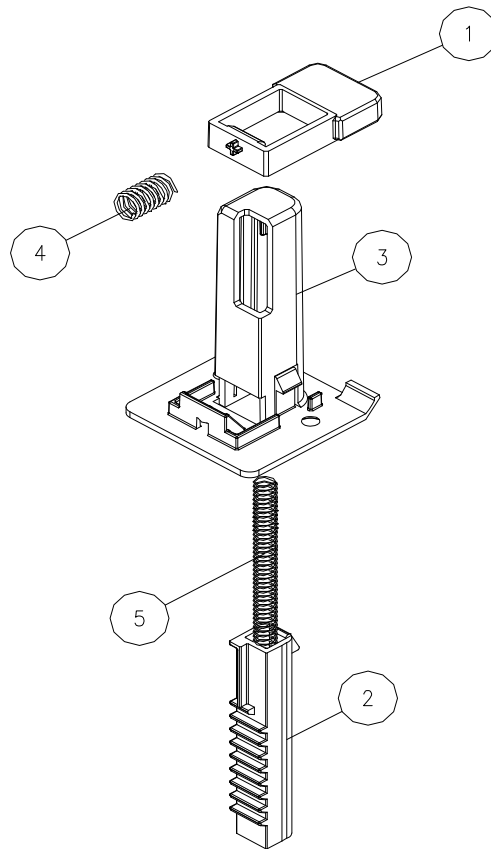


Exploded Parts List

Item	Part No	Description
1	51.82G24G001	LAMP DRIVER INSULA MYLAR EP7190
2	51.85816.001	LIMIT SWITCH HOLDER PPS XB31
3	51.85824.001	LIMIT SWITCH BOTTOM HOLDER PPS XB31
4	52.88504.001	THERMAL PAD 21*26*3t FOR LVPS
5	61.82G01G001	BASE PLATE MgAlloy AZ91D EP7190
6	70.82G08G001	ASSY LVPS MODULE EP7190 "GREEN"
7	70.82G17G001	ASSY BLOWER FAN MODULE EP7190 "GREEN"
8	75.88514.002	ASSY LIMIT SWITCH CHERRY DB3C A1LB-5A
9	76.82G01G001	BUY ASSY W.A. 2P 150mm LVPS/LAMP EP719
10	80.82G04G001	PCBA THERMAL SENSOR BOARD EP7190
11	85.1A123.050	SCREW PAN MECH M3*5 NI
12	85.1A126.040	SCREW PAN MECH M2.6*4 Ni
13	85.3A122.040	SCREW CAP MECH M2*4 Ni

Note: Please refer to RSPL for updated Part Number.

VI. ELEVATOR MODULE

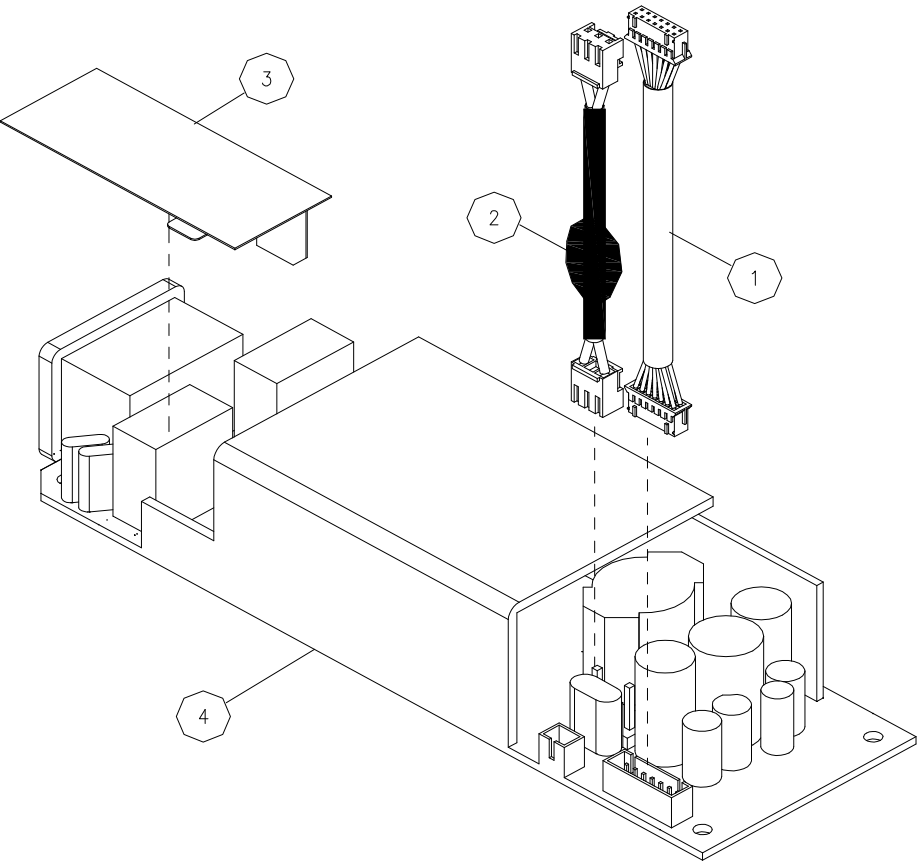


Exploded Parts List

Item	Part No	Description
1	51.82G15G001	ELEVATOR PUSH PC+ABS C6200 EP719
2	51.86809.001	ELEVATOR BODY NYLON+GF DP725
3	51.86810G071	ELEVATOR HOLDER PC+ABS C6200 EP7190
4	61.85913.001	ELEVATOR SPRING SUS304 SB21
5	61.86814.001	ELEVATOR SPRING SUS304 SB21

Note: Please refer to RSPL for updated Part Number.

VII. LVPS MODULE

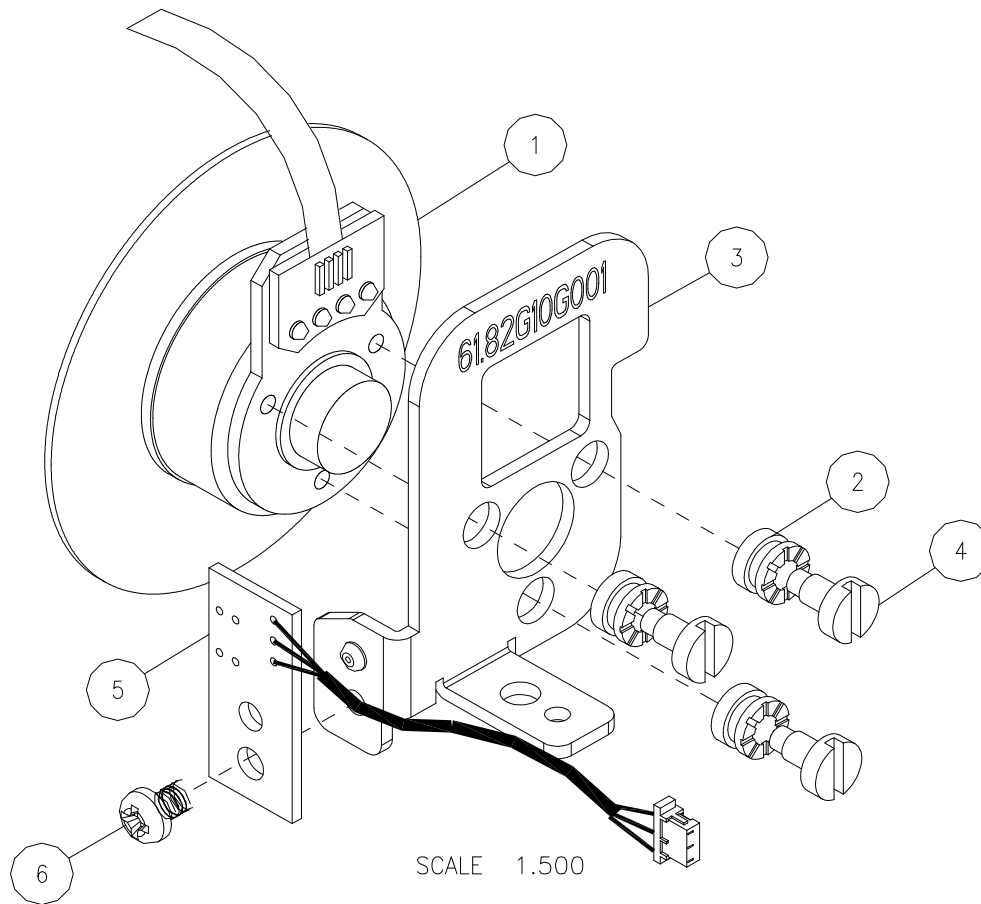


Exploded Parts List

Item	Part No	Description
1	42.81G01.001	W.A. 2P #20 160mm LAPS/BALLAST H31
2	42.88502.002	W.A. 14P 130mm LVPS TO M/B 2200MP
3	51.82G19G001	LVPS LEAD WIND PC MYLAR EP7190
4	75.81J01.003	ASSY LVPS QUASAR 200W EP739/H31

Note: Please refer to RSPL for updated Part Number.

VIII. Color Wheel Module

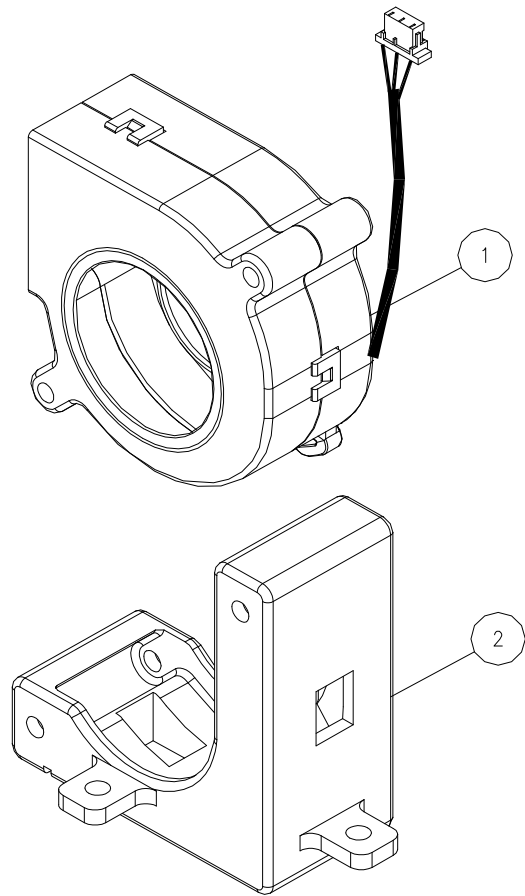


Exploded Parts List

Item	Part No	Description
1	23.82G19G001	R92G83B75W110 COLOR WHEEL "GREEN"
2	52.83615.001	COLOR WHEEL DISC RUBBER , EzPro755
3	61.82G10G001	COLOR WHEEL HOLDER SECC 1.2t EP7190 "GREEN"
4	61.83628.001	COLOR WHEEL SHOULDER SCREW , EzPro755
5	80.82G06G001	PCBA PHOTO SENSOR BOARD EP719
6	85.1A626.040	SCREW PAN MECH M2.6*4 BLACK NYLON

Note: Please refer to RSPL for updated Part Number.

IX. BLOWER FAN MODULE

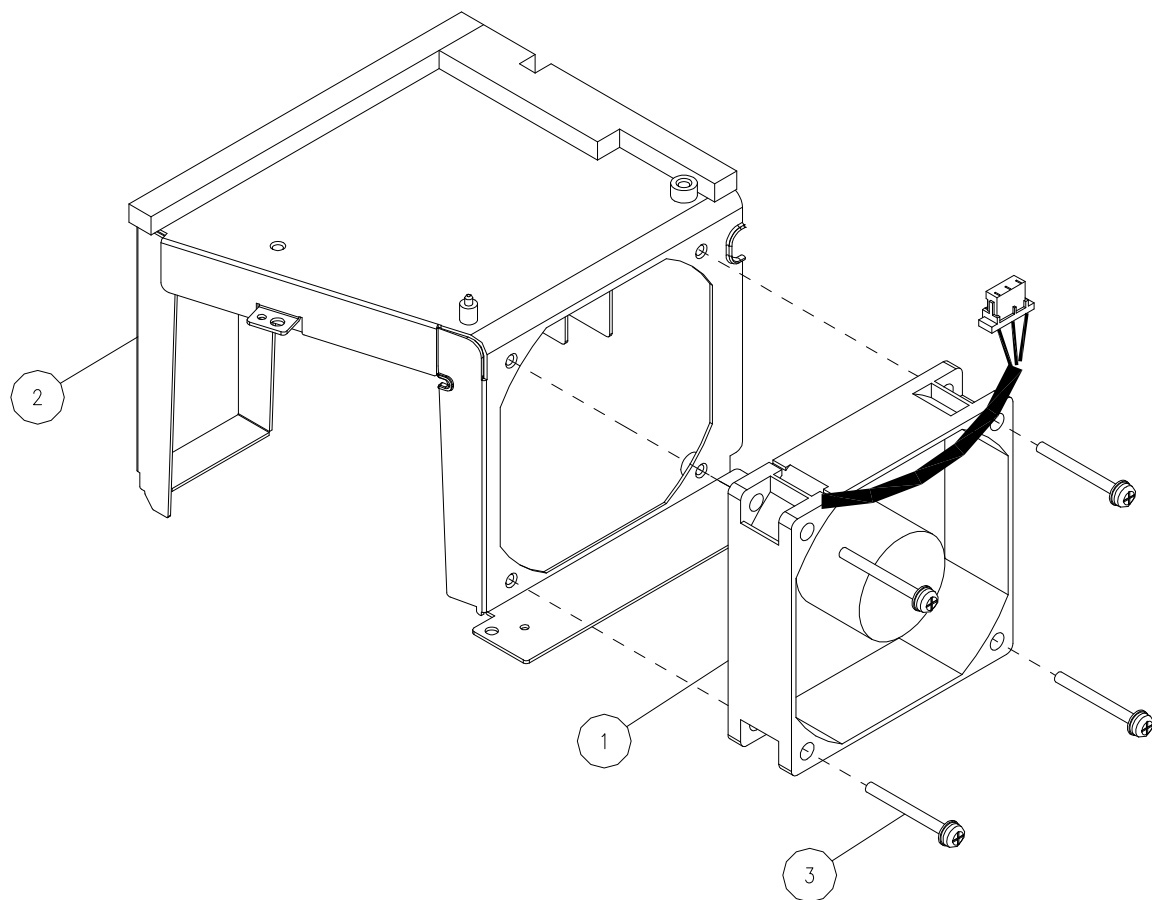


Exploded Parts List

Item	Part No	Description
1	49.82G01G001	MISC BLOWER 45*20 "GREEN"; DELTA
2	52.82G08G001	BLOWER 4520 RUBBER EP7190 "GREEN"

Note: Please refer to RSPL for updated Part Number.

X. AXIAL FAN MODULE

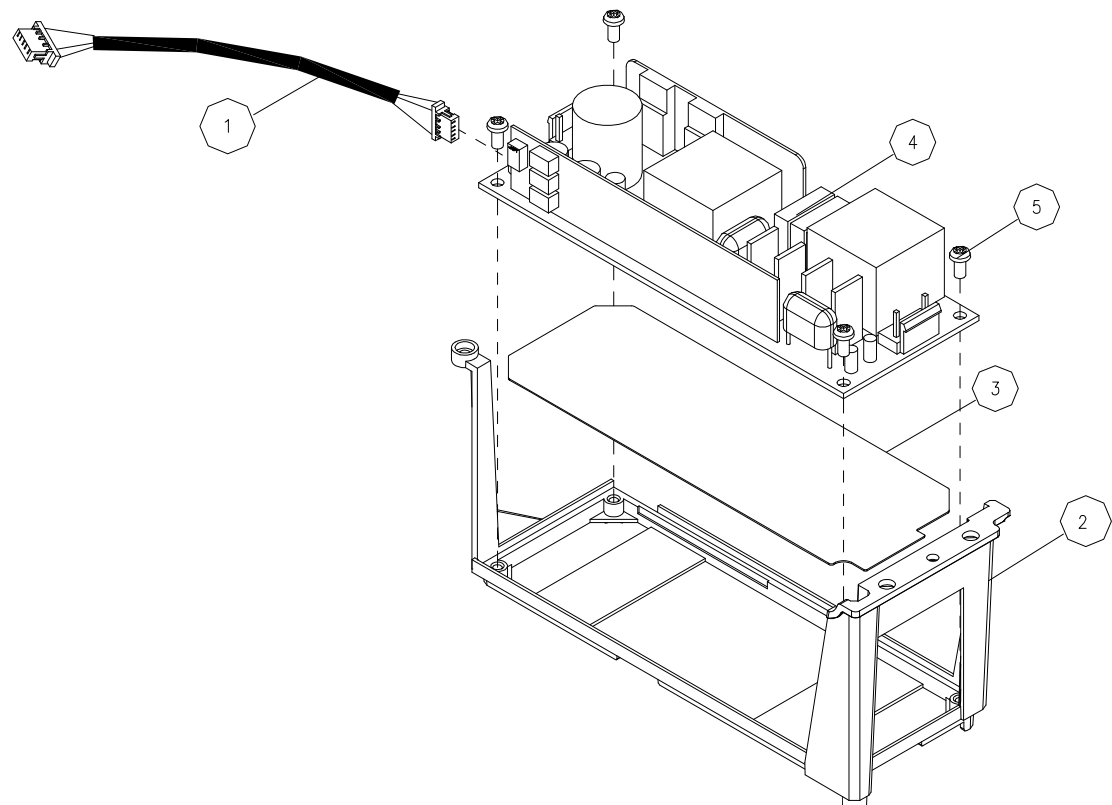


Exploded Parts List

Item	Part No	Description
1	49.80N01.001	SUNON 70*20 R-TYPE AXIAL FAN
2	75.82G04G001	BUY ASSY 7020 FAN BRACKET EP719
3	85.1F123.260	SCREW PAN MECH E/SF M3x26 Ni

Note: Please refer to RSPL for updated Part Number.

XI. LAMP DRIVER

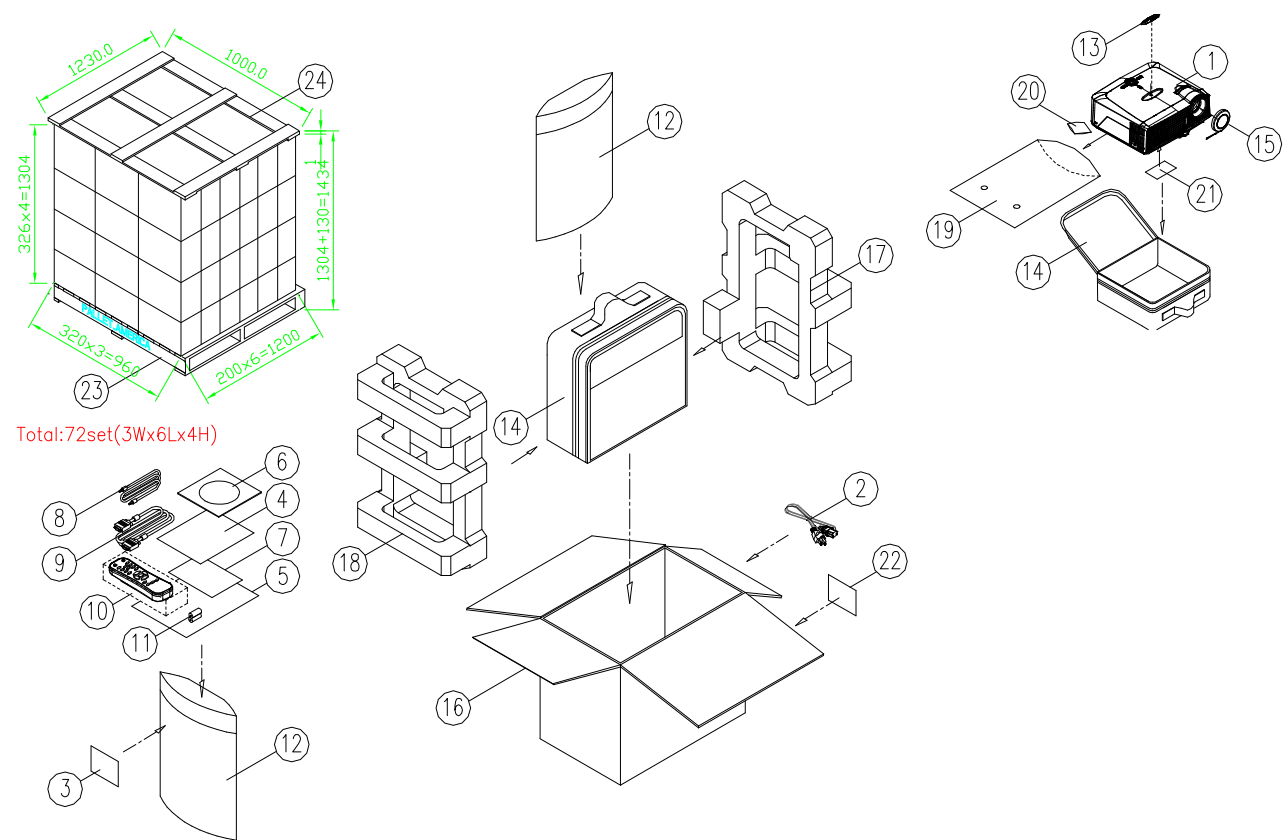


Exploded Parts List

Item	Part No	Description
1	42.82G01G001	W.A. 5P #28 200mm LAMP DRIVER TO MAIN BD EP719 "GREEN"
2	51.82G17G001	LAMP DRIVER HOLDER PC+ABS C6200
3	51.82G23G001	LAMP DRIVER INSULA MYLAR EP7190
4	75.88501.001	ASSY PHILIPS LAMPDRIVER 2200MP
5	85.WA123.060	.SCREW PAN TAP M3*6 Ni

Note: Please refer to RSPL for updated Part Number.

XII. PACKING PROCEDURE DRAWING

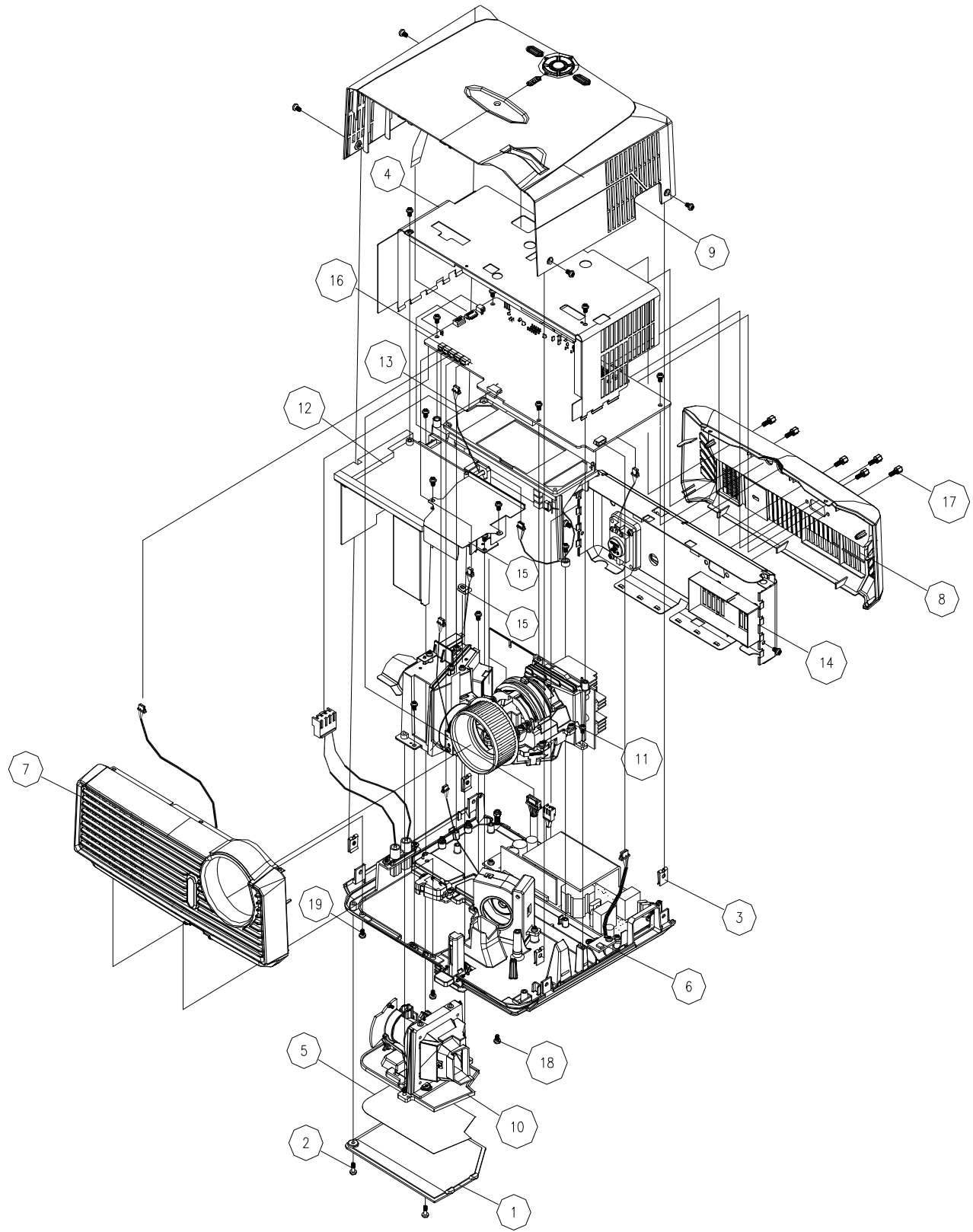


Exploded Parts List

Item	Part No	Description
1	PART NO.	D.C. EP719
2	42.50115.001	CABLE POWER CORD 1830mm SP30+IS14
	AK.82G01G00A	A.K. EP719 AMERICA
3	35.82001.111	LABEL CARTON 3"x3" BLANK PJ885
4	36.00018.001	EXTEND WARRANTY;REGISTRATION FROM,USA
5	36.80A01.001	SAFETY & WARRANTY GUIDE, MULTILINGUAL H30
6	36.82G01G001	EP719 USER GUIDE (CD)
7	36.82G02G001	EP719 QUICK START GUIDE
8	42.87205.001	CABLE COMPOSITE VIDEO 1.8M 3200MP
9	42.87305.001	CABLE VGA 15P 1.8M BLK 2100MP
10	45.82G01.001	REMOTE CONTROL W/DVI BUTTON EP719
11	46.80301.001	BATTERY #4 1.5V
12	51.80136.001	PE BAG ZIPPER 280x200x0.04 #9
	DP.82G01G001	D.P. EP719
13	51.86726.001	OPTOMA LOGO EP731
14	53.82G01.001	SOFT CARRY BAG FOR EP719/EP716
15	75.82G03G001	BUY ASSY LENS CAP MODULE EP719
16	55.82G01G001	CARTON OUSIDE B FLUTE EP719
17	56.82G01G001	CUSHION EPE RIGHT EP719
18	56.82G02G001	CUSHION EPE LEFT EP719
19	51.00174G001	PE BAG 450*350*0.07 LMT-5020
20	57.00001G001	PACK SIO2 DRIER 20g "GREEN"
21	35.81406.001	LABEL SPEC 32*106 BLANK EzPro 710
22	35.82001.111	LABEL CARTON 3"x3" BLANK PJ885
23	58.86201G001	WOOD PALLET 48"*40*5"(DOUBLE FACE) "GREEN"
24	58.86202G001	COVER PALLET 1240*1020mm FOR EzPro 736 "GREEN"

Note: Please refer to RSPL for updated Part Number.

EP716 Unit

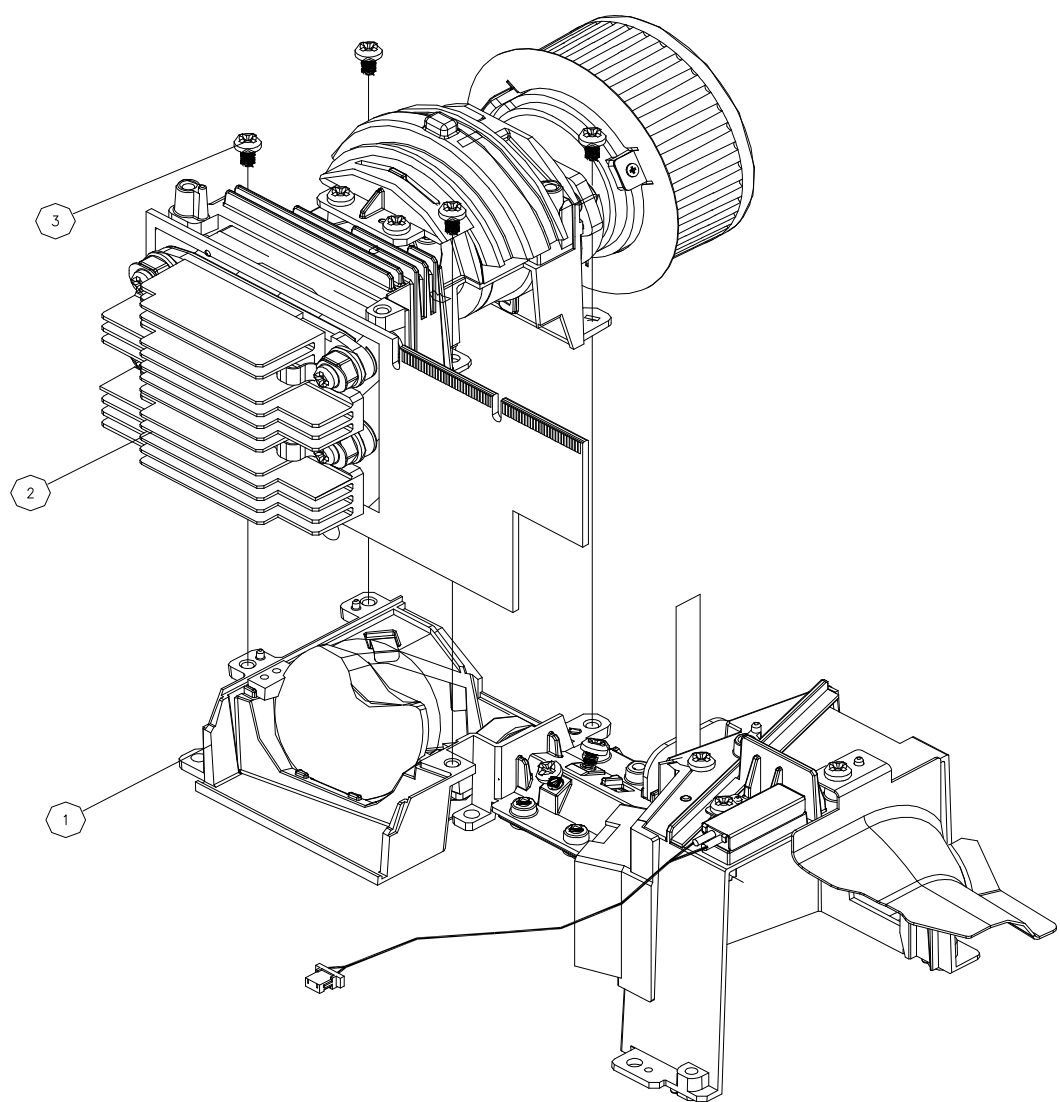


Exploded Parts List

Item	Part No	Description
1	51.82G05G001	LAMP COVER NORYL N300 EP7190 "GREEN"
2	61.80511.001	SCREW PAN MECH M3*8-4 BLACK
3	61.81105.001	NUT PLATE SUS 0.5t EzPro 610
4	75.82G07G001	BUY ASSY EMI FRONT PLATE EP719
5	61.82G28G001	LAMP COVER AL FOIL 0.1t EP719 "GREEN"
6	70.82G01G001	ASSY BOTTOM HOUSING MODULE EP7190 "GREEN"
7	70.82G02G001	ASSY FRONT COVER MODULE EP7190
8	70.82M07G001	ASSY BACK COVER MODULE EP716
9	70.82M06G001	ASSY TOP COVER MODULE EP716
10	70.82G09G001	ASSY LAMP MODULE EP7190
11	70.82M02G001	ASSY ENGINE MODULE EP716
12	70.82G18G001	ASSY AXIAL FAN MODULE EP7190 "GREEN"
13	70.82G19G001	ASSY LAMP DRIVER MODULE EP7190
14	70.82G20G001	ASSY EMI GROUND PLATE MDULE EP719
15	75.82G07G001	BUY ASSY EMI FRONT PLATE EP719
16	80.82M01G001	PCBA MAIN BOARD EP716
17	85.005AG.408	SCREW HEX I/O #4-40 H4xL8 Ni NYLOK
18	85.1A123.050	SCREW PAN MECH M3*5 NI
19	85.5A323.060	SCREW BIN MECH M3*6 Black
19	61.00079G001	GROUNDING CABLE CLAMP FN-008 "PINGOOD"

Note: Please refer to RSPL for updated Part Number.

EP716 Assy Engine Module

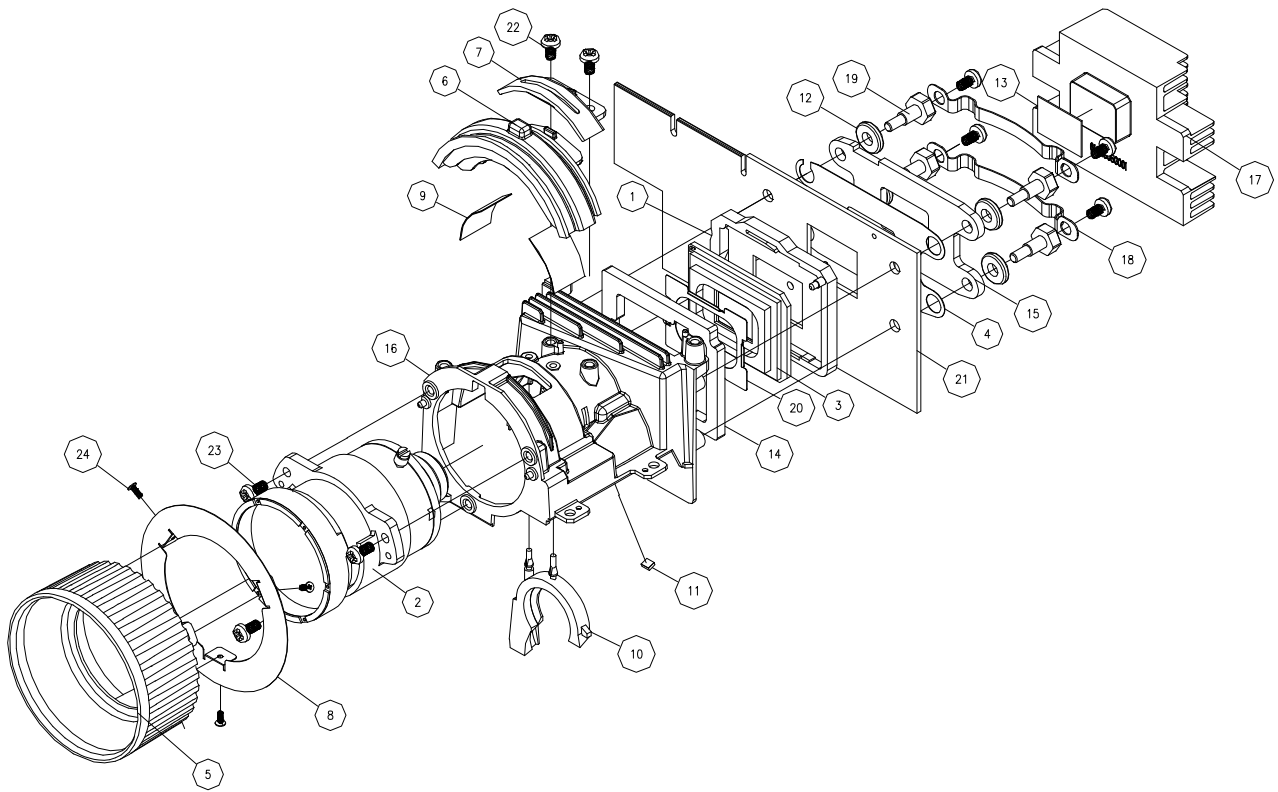


Exploded Parts List

Item	Part No	Description
1	70.82G13G001	ASSY ENGINE BOTTOM COVER MODULE EP7190
2	70.82M03G001	ASSY ENGINE TOP MODULE EP716
3	85.1A123.050	SCREW PAN MECH M3*5 Ni

Note: Please refer to RSPL for updated Part Number.

EP716 Engine Top Cover Module

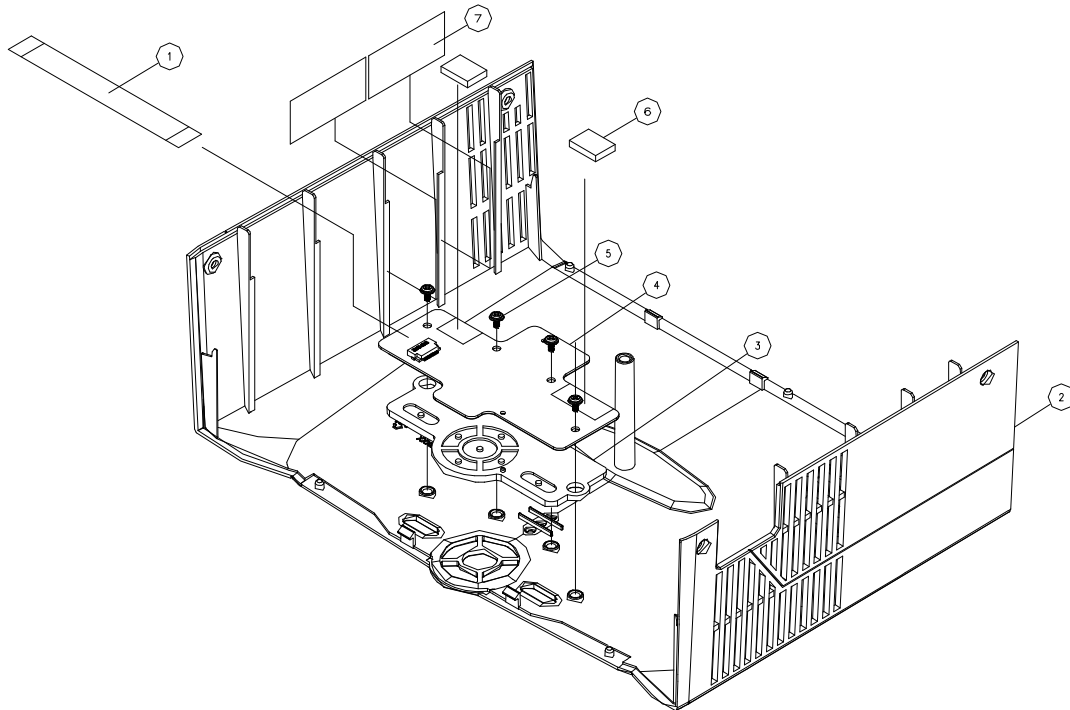


Exploded Parts List

Item	Part No	Description
1	11.009F0G005	CNNT F 166P FOR 0.55" SVGA LGA DMD SOCKET;FOXCONN
2	23.82G01G002	PROJECTION LENS BARREL CHA
3	48.859DMGD13	DMD 800*600 PIXEL DDR FTP 0.55" SVGA
4	51.80B31G001	DMD INSULATOR MYLAR .8t 3300MP
5	51.82G06G001	FOCUS RING PC+ABS C6200 EP7190 "GREEN"
6	51.82G07G001	ZOOM RING PC+ABS C6200 EP7190
7	51.82G08G001	ZOOM RING ORBIT PC+ABS C6200 EP7190 "GREEN"
8	51.82G21G001	FOCUS RING LIGHTCUT MYLAR EP7190 "GREEN"
9	51.82G22G001	ZOOM ANTI-ABRASION TEFLON EP7190 "GREEN"
10	52.82G03G002	RELAY SEALED RUBBER-2 EP719
11	52.82G10G001	RELAY CUSHION RUBBER EP7190 "GREEN"
12	52.87130G001	RUBBER BLOWER 595925 "GREEN"
13	52.87319G001	DMD THERMAL PAD 18*13*0.5t "GREEN"
14	52.89627G002	DMD SEAL RUBBER BF1000 3.2t EP719
15	61.80J48G001	DMD HEATSINK BACKER PLATE 739 AL6061 "GREEN"
16	61.82G02G001	ENGINE TOP COVER Mg Alloy-AZ91D EP7190
17	61.82G05G001	DMD HEATSINK AL EP7190 "GREEN"
18	61.88608G001	DMD HEATSINK SPRING PLATE SUS301 0.4t lvy10X
19	61.88611G001	DMD SCREW lvy10X "GREEN"
20	61.89643G001	DMD MASK PLATE SUS301 0.15t EP759
21	80.82G02G001	PCBA DMD BOARD EP7190
22	85.1A123.050	SCREW PAN MECH M3*5 NI
23	85.1A123.060	SCREW PAN MECH M3*6 Ni
24	85.YA321G051	SCREW FLAT HEAD TAP M1.7*5 BLACK

Note: Please refer to RSPL for updated Part Number.

EP716 Assy Top Cover Module

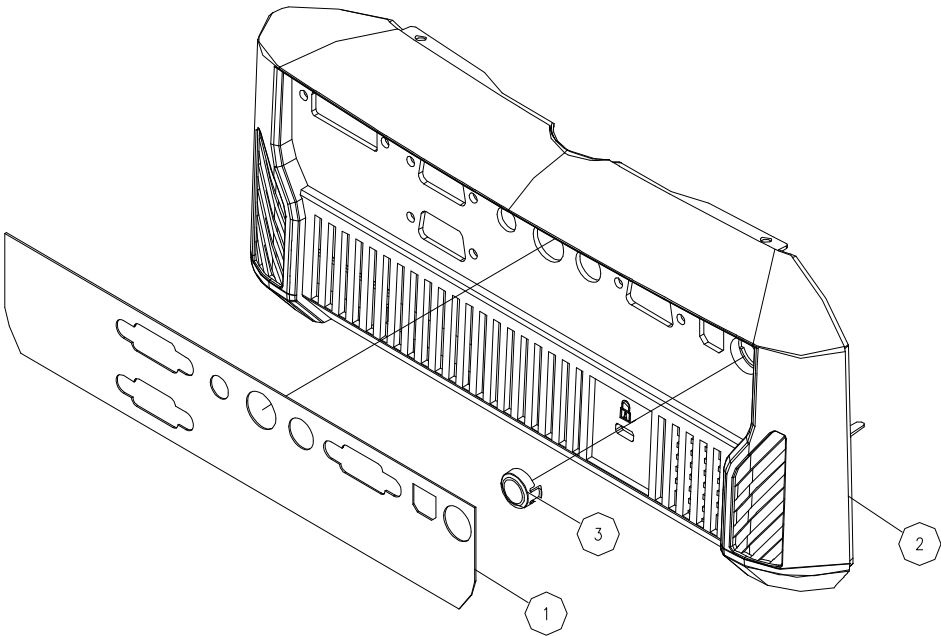


Exploded Parts List

Item	Part No	Description
1	42.82G02G001	CABLE FFC 14P 100mm EP719
2	51.82G01G021	TOP COVER PC+ABS C6200 EP716
3	52.82G01G001	KEYPAD LED LENS RUBBER EP7190 "GREEN"
4	80.82G03G001	PCBA KEYPAD BOARD EP719 "GREEN"
5	85.1D122.040	SCREW PAN MECH M2*4 Ni (W/WASHER D5.0)
6	41.82G05G001	EMIGASKET W10*L20*H3mm EP719
7	51.81541G001	TAPE 3M J350 17*30mm

Note: Please refer to RSPL for updated Part Number.

EP716 Assy Back Cover Module



Exploded Parts List

Item	Part No	Description
1	35.82G01G021	LABEL FOR IO CONNECTOR EP716
2	51.82G04G021	BACK COVER PC+ABS C6200 EP716
3	51.82G10G001	IR LENS REAR PC EP7190

Note: Please refer to RSPL for updated Part Number.

Appendix C

I. Serial Number System Definition

Serial Number Format for Projector

A BBB Y WW C D BEMO EEEE
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

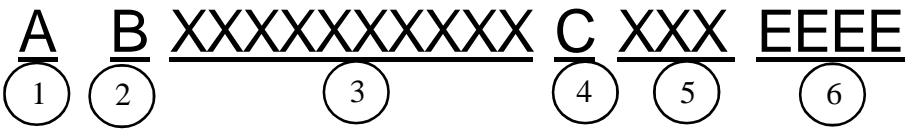
- ① : A = Optoma, B~Z = OEM
- ② : Product code (ex: 82G = EP719 ; 82M = EP716)
- ③ : Y = Last number of the year (ex: 2004 - 4)
- ④ : Week of year
- ⑤ : Panel vendor code
- ⑥ : Electrical classification (1=110V, 2=220V, 0=universal)
- ⑦ : B = BIOS version, E = PCB board version,
M = Mechanical version, O = Optical version
- ⑧ : Serial code (from 0001~)

EX : A82G429T0AAAA1001

This label "A82G429T0AAAA1001" represents the whole serial number for EP719, including Ver. 1st of BIOS and Ver. 1 of PCB Board. Both mechanical and optical version are 1st. In addition, panel vendor is T0. It's produced on 29s-week of 2004 for universal area and its serial code is 1001.

II. PCBA Code Definition

PCBA Code for Projector



- 1 : ID

C: M/B
B: DMD/ B
- 2 : Vendor Code
- 3 : P/N
- 4 : Revision
- 5 : Date Code
- 6 : S/N

Reader's Response

Dear Readers:

Thank you for your backing our service manual up. In order to refine our content of the service manual and satisfy your requirement. We expect you can offer us some precious opinions for reference.

Assessment:

A. What do you think about the content after reading EP719 / EP716 Service Manual?

<i>Unit</i>	<i>Excellent</i>	<i>Good</i>	<i>Fair</i>	<i>Bad</i>
1. Introduction				
2. Disassembly Procedure				
3. Troubleshooting				
4. Function Test & Alignment Procedure				
5. Firmware Upgrade Procedure				
6. DDC key-in Procedure				
7. Appendix				

B. Are you satisfied with the EP719 / EP716 service manual?

<i>Item</i>	<i>Excellent</i>	<i>Good</i>	<i>Fair</i>	<i>Bad</i>
1. Service Manual Content				
2. Service Manual Layout				
3. The form and listing				

C. Do you have any other opinion or suggestion about this service manual?

Reader's basic data:

Name:		Title:	
Company:			
Add:			
Tel:		Fax:	
E-mail:			

After your finishing this form, please send it back to Coretronic Customer Service Dept. by fax: 886-3-563-5333.